1/55P

320REQ0007 498568

DATA REQUIREMENT (DR) - 10

EXPERIMENT/FACILITY REQUIREMENTS DOCUMENT FOR THE SPACE STATION FURNACE FACILITY

SECTION 1: INTEGRATED CONFIGURATION-1

(NASA-CR-192533)
EXPERIMENT/FACILITY REQUIREMENTS
DOCUMENT FOR THE SPACE STATION
FURNACE FACILITY. SECTION 1:
INTEGRATED CONFIGURATION Final
Report (Teledyne Brown
Engineering) 350 p

N93-27147

unclas

G3 ⊯/18 0165062

DRAFT MAY 1992 .

•

.

.

· · · · ·

FOREWORD

The Space Station Furnace Facility (SSFF) is designed to accommodate and support a variety of furnace modules throughout the operational lifetime of the facility. Since the SSFF will be operational for 30 years, and various furnace modules will be accommodated, the Experiment/Facility Requirements Document (E/FRD) is divided into two separate sections. Section 1 describes the integrated SSFF-to-SSF interface, which includes the SSFF Core subsystem requirements and the furnace module requirements based on the information obtained from the Furnace Developer's Section 2, and Section 2 describes the furnace module-to-SSFF interface. Multiple Section 2s may be required for each E/FRD, depending on how many furnace modules the SSFF will accommodate per mission, since a separate Section 2 will be written for each furnace module. Both sections will be replaced for each mission with the appropriate mission-peculiar furnace module interface requirements since the Core configuration is a function of the furnace module(s).

This E/FRD reflects the Initial Configuration-1 (IC1), which is the initial integration of the SSFF Core and Furnace Module-1 into the SSF U. S. Laboratory Module-A. IC1 is planned for 1997, based on the assumption that Utilization Flight 3 (UF-3) is the carrier. Furnace Module-1 is scheduled to be an upgrade of the present Crystal Growth Furnace (CGF), and Section 2 reflects the requirements of that module.

•

•

.

TABLE OF CONTENTS

(1	
1.1 FUNCTIONAL OBJECTIVES AND EQUIPMENT IDENTIFICATION	1.1-1
1.1.1 System Description	1.1-1
1.1.2 Functional Objectives	1.1-1
1.1.3 Equipment Identification	1.1-3
1.1.4 Operational Functional Flows	1.1-3
1.2 STRUCTURAL/MECHANICAL	1.2-1
1 2 1 Fauinment List and Mass Properties	1.2-1
1.2.2 Interface Detail	1.2-1
1.2.2.1 SSF-to-SSFF MSS Interface	1.2-1
1.2.2.2 SSF-to-SSFF Core Rack Interface	1.2-12
1.2.2.2.1 SSFF EPS-to-SSFF Core Rack	1.2-12
1.2.2.2.2 SSFF DMS-to-SSFF Core Rack	
1.2.2.2.3 SSF TCS-to-SSFF Core Rack	1.2-12
1.2.2.2.4 SSF VES-to-SSFF Core Rack	1.2-12
1.2.2.2.5 SSF-to-SSFF Experiment Rack-1 Interface	1.2-12
1.2.2.3 SSF-to-SSFF Experiment Rack-1 Interface	1.2-12
1.2.2.4 Crew Interface	1.2-15
1.3 POINTING/STABILIZATION AND ALIGNMENT	1.3-1
1.4 ORBITAL REQUIREMENTS AND CONSTRAINTS	1.4-1
1.5 ELECTRICAL REQUIREMENTS	1.5-1
1.6 THERMAL FLUID REQUIREMENTS	1.6-1
1.6.1 Heat Transfer Characteristics	1.6-1
1.6.2 Fluid/Vent Requirements	1.6-1
1.7 DATA SYSTEM REQUIREMENTS	1.7-1
1.7.1 Signal Interface Definition	1.7-1
1.7.2 Signal Interface Definition Expansion	1.7-1
1.7.3 Event/Exception Monitoring Requirements	1.7-1
1.7.4 Payload Operations Integration Center Display Requirements	1.7-1
1.7.5 POIC Limit Sensing/Exception Monitoring Requirements	
1.8 FLIGHT SOFTWARE REQUIREMENTS	. 1.8-1
1.8.1 Command Support	. 1.8-1
1.8.2 Health and Status Data	
1.8.3 Onboard Storage	. 1.8-1
1.8.4 Display	. 1.8-1
1.8.5 Program Loads and Modifications Downloading	. 1.8-1
1.8.6 Ancillary Data	. 1.8-1

TABLE OF CONTENTS (Cont.)

SECT	<u>ION</u>		TITLE	PAGE
1.9	PHYS	ICAL INT	TEGRATION	1.9-1
	1.9.1	Rack Into	egration and Checkout	1.9-1
		1.9.1.1	Core Rack Checkout	1.9-1
		1.9.1.2	Experiment Rack-1 Checkout	1.9-1
		1.9.1.3	Furnace Module-1 Checkout	1.9-1
•		1.9.1.4	Integrated Furnace Rack Checkout	1.9-1
		1.9.1.5	SSFF Facility Checkout	1.9-5
	1.9.2	KSC Ver	rification	1.9-5
	1.9.3	Postland	ing	1.9-5
1.10	OPER	ATIONS	SUPPORT	1.10-1
1.11	TRAII	VING OB	JECTIVES	1.11-1
1.12	ENVI	RONMEN	TAL CONTAMINATION DATA REQUIREMENTS	1.12-1

LIST OF FIGURES

FIGURE	TITL'S	PAGE
1.1-1	SSFF IC1 Configuration	1.1-2
1.1-2	DMS Component Tree	1.1-40
1.1-3	PCDS Component Tree	1.1-41
1.1-4	TCS Component Tree	1.1-42
1.1-5	GDS Component Tree	1.1-43
1.1-6	Furnace Module-1 Equipment Pictorial Representation	1.1-44
1.1-7	SSFF Block Diagram	1.1-45
1.2-1	SSFF-to-SSF Resource Interfaces	1.2-2
1.2-2	SSF-to-SSFF Core Rack Physical Interface	1.2-9
1.2-3	SSF-to-SSFF Experiment Rack-1 Physical Interface	1.2-10
1.2-4	SSFF Interconnect Tray Assembly	1.2-11
1.2-5	Core Rack Panel Layout	1.2-13
1.2-6	Experiment Rack-1 Panel Layout	1.2-14
1.5-1	PCDS Interface Block Diagram	1.5-2
1.5-2	Power Profiles by Functional Objectives	1.5-3
1.6-1	TCS Interface Block Diagram	1.6-2
1.6-2	GDS Interface Block Diagram	
1.7-1	DMS Interface Block Diagram	
1.8-1	SSFF Software External Interface Diagram	
1.8-2	Software Component Tree	1.8-3
1.9-1	Physical Integration Flow	
1.9-2	Physical Deintegration Flow	
	,	

320REQ0007

LIST OF TABLES

TABLE	TITLE	<u>PAGE</u>
1.1-1	SSFF Functional Objectives	1.1-4
1.1-2	Functional Objective Requirements Sheets	1.1-21
1.1-3	SSFF Operational Functional Flow	1.1-46
1.2-1	List of Equipment Properties	1.2-3
1.2-2	Stowage List	1.2-8
1.6-1	On-Orbit Thermal Requirements	1.6-3
1.6-2	Fluid Requirements	1.6-6
1.7-1	Signal Interface Definition	1.7-3
1.7-2	Signal Interface Definition Expansion	1.7-4
1.7-3	Event/Exception Monitor Requirements	1.7-42
1.7-4	POIC Display Requirements	1.7-43
1.7-5	POIC Limit Sensing/Exception Monitor Requirements	1.7-63
1.9-1	SSFF Integration Ground Processing Requirements	1.9-3
1.9-2	SSFF Integration Requirements	1.9-4
1.9-3	SSFF Postlanding Ground Processing Requirements	1.9-6
1.10-1	SSFF Mission Operations Support	1.10-2
1.11-1	Training Participation	1.11-2
1.11-2	Training Objectives	1.11-3
1.12-1	Flight Environment Limits	1.12-2
1.12-2	External Contamination Sources	1.12-3

ACRONYM LIST

AA Avionics Air

CCF Centralized Core Function

CCOS Centralized Core Operating System

CCU Core Control Unit
CdTe Cadmium Telluride

CGF Crystal Growth Furnace

cm Centimeter

CMCU Core Monitor and Control Unit

CP Coldplate

CPC Core Power Conditioners

CPCS Core Power Conditioners Stimulus

CRW Crew

CSF Core-Specific Function

Data Management Subsystem (SSFF)

DC Direct Current

DCF Distributed Core Function

DCMU Distributed Core Monitoring Unit
DCOS Distributed Core Operating System

dia Diameter

DMS Data Management System (SSF)

DR Data Requirement

E/FRD Experiment/Facility Requirements Document

EAC Experiment Apparatus Container

EPS Electrical Power System

ESF Experiment-Specific Function

Ess Essential

FAU Furnace Actuator Unit
FCU Furnace Control Unit

FDACS Furnace Data Acquisition and Control System

FDDI Fiber Distributed Data Interface

FDIR Fault Detection, Isolation, and Recovery

FDS Fire Detection and Suppression

FM-1 Furnace Module-1 FO Functional Objective

ft Foot

ACRONYM LIST (Cont.)

ft² Square foot

FTM Furnace Translation Mechanism

g Gravity

GaAs Gallium Arsenide

GDS Gas Distribution Subsystem

GHE Gaseous Helium
GN₂ Gaseous Nitrogen

GND Ground

GSE Ground Support Equipment

H/W Hardware H₂O Water

HDR High-Density Recorder
HgZnTe Mercury Zinc Telluride
HRDL High-Rate Data Link

h Hour

HX Heat Exchanger

Hz Hertz

IC1 Integrated Configuration-1

IROP Integrated Requirements on Payloads
IFEA Integrated Furnace Enclosure Apparatus
ISPR International Standard Payload Rack

ISS Internal Support Structure

JSC Johnson Space Center

kg Kilogram

KSC Kennedy Space Center

kW Kilowatt kWh Kilowatthour

LAN Local Area Network

lbm Pound Mass

LNS Liquid Nitrogen System

MBPS Megabytes per Second

MDM Multiplexer/Demultiplexer

mm Millimeter

MPAC Multipurpose Application Console

ACRONYM LIST (Cont.)

MPLM Mini-Pressurized Logistics Module

MSFC Marshall Space Flight Center

MSS Mechanical Structures Subsystem

NASA National Aeronautics and Space Administration

NTSC National Television Standard Committee

OMIS Operations Management Information System

ORU Orbital Replacement Unit

PAM Payload Accommodations Manager

PCDS Power Conditioning and Distribution Subsystem

PED Payload Element Developer

PES Payload Executive Software

PI Payload Investigator

PIC Payload Integration Center

PIM Payload Increment Manager

PLM Pressurized Logistics Module

POIC Payload Operations Integration Center

ppm Parts per Million

psia Pounds per Square Inch Absolute

PTRD Payload Training Requirements Document

QD Quick Disconnect

RFM Reconfigurable Furnace Module

RPC Remote Power Controller

RPCM Remote Power Controller Module

RPDA Remote Power Distribution Assembly

S/W Software

SACA Sample Ampoule/Cartridge Assembly

sec Second

SEM Sample Exchange Mechanism

SIP Sample Insertion Port

SS Subsystem

SSF Space Station Freedom

SSFF Space Station Furnace Facility

STS Space Transportation System

SW Software

ACRONYM LIST (Conc.)

TAT Training Assessment Team

TBD To Be Determined

TCS

Thermal Control System (SSF)
Thermal Control Subsystem (SSFF)

Utilization Flight 3 UF-3

UPTP User Payload Training Plan

United States Laboratory USL

V Volt

Vdc Volts Direct Current

VES Vacuum Exhaust System

W Watt

Micrometer μm

МΩ Megohm

1.1. FUNCTIONAL OBJECTIVES AND EQUIPMENT IDENTIFICATION

1.1.1 SYSTEM DESCRIPTION

The function of the Space Station Furnace Facility (SSFF) is to support materials research into the crystal growth and solidification processes of electronic and photonic materials, metals and alloys, and glasses and ceramics. To support this broad base of research requirements, the SSFF will employ a variety of furnace modules operated, regulated, and supported by a core of common subsystems. Furnace modules may be reconfigured or specifically developed to provide unique solidification conditions for each set of experiments. The SSFF modular approach permits the addition of new or scaled-up furnace modules to support the evolution of the facility as new science requirements are identified. The SSFF Core is of modular design to permit augmentation for enhanced capabilities.

The fully integrated configuration of the SSFF will consist of three racks with the capability of supporting up to two furnace modules per rack. The initial configuration of the SSFF will consist of two of the three racks and one furnace module. This Experiment/Facility Requirements Document (E/FRD) describes the integrated facility requirements for the Space Station Freedom (SSF) Integrated Configuration-1 (IC1) mission. The IC1 SSFF will consist of two racks: the Core Rack, with the centralized subsystem equipment, and the Experiment Rack-1, with Furnace Module-1 and the distributed subsystem equipment to support the furnace.

The IC1 SSFF configuration is shown in Figure 1.1-1. It consists of two double rack replacement structures, the centralized and distributed components to support furnace operations, and Furnace Module-1. The SSFF support functions are provided by the following Core subsystems:

- Power Conditioning and Distribution Subsystem (SSFF PCDS)
- Data Management Subsystem (SSFF DMS)
- Thermal Control Subsystem (SSFF TCS)
- Gas Distribution Subsystem (SSFF GDS)
- Mechanical Structures Subsystem (SSFF MSS)

1.1.2 FUNCTIONAL OBJECTIVES

There are 13 functional objectives (FOs) for the SSFF which are structured as one FO for payload checkout: one FO for Core activation; one FO for the distributed equipment activation; eight FOs for experiment sample operations, calibration/bakeout, and vent and purge cycles; one FO for furnace sample loading or shutdown; and one FO for SSFF shutdown. The actual FO numbering is as follows:

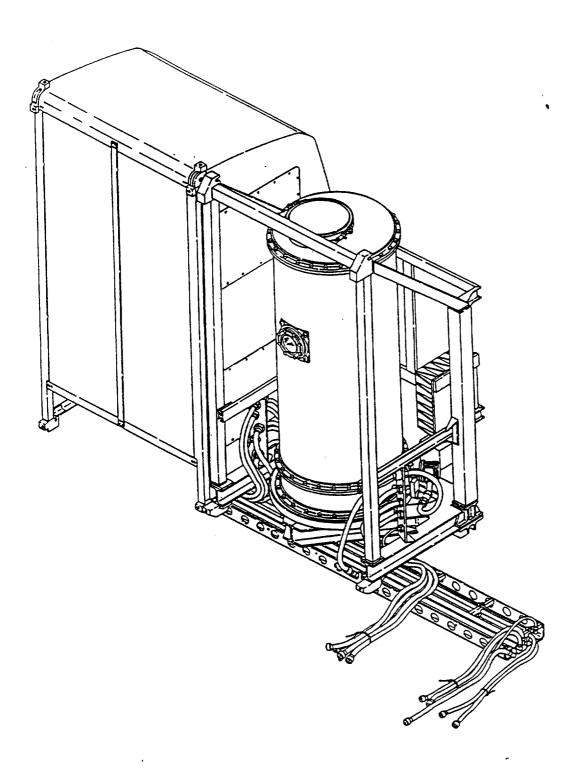


FIGURE 1.1-1. SSFF IC1 CONFIGURATION

FO-0 Payload Checkout FO-1 Core Activation FO-2 Distributed Equipment Activation FO-3 Furnace Module-1 Sample Exchange FO-4 Furnace Module-1 Vent/Purge FO-5 Furnace Module-1 Process Sample HgCdTe FO-6 Furnace Module-1 Process Sample HgZnTe FO-6A Furnace Module-1 Process Sample Extended HgZnTe FO-7 Furnace Module-1 Process Sample CdTe FO-8 Furnace Module-1 Process Sample GaAs FO-9 Configure Furnace Module-1 for Sample Loading or Shutdown FO-10 SSFF Shutdown

Furnace Module-1 Process Calibration/Bakeout

Table 1.1-1 shows a listing of the SSFF FOs along with the equipment associated with each step of each FO. Step duration, crew time requirements, and average power requirements for each step of each FO are defined in Table 1.1-2, Functional Objective Requirements Sheets.

1.1.3 EQUIPMENT IDENTIFICATION

FO-11

The SSFF will occupy two double rack locations in the U. S. Laboratory (USL) for IC1. The Core Rack, modified [relative to the International Standard Payload Rack (ISPR)] to permit interconnections to the adjacent experiment rack, will provide mechanical/structural interface for the centralized SSFF subsystem components. Experiment Rack-1 will provide mechanical/structural interface for distributed SSFF subsystem equipment required to support the furnace operation, and Furnace Module-1. Figures 1.1-2 through 1.1-5 show the SSFF centralized and distributed equipment to the Orbital Replacement Unit (ORU) level per subsystem. Figure 1.1-6 shows the Furnace Module-1 equipment. A block diagram of the SSFF is shown in Figure 1.1-7, which identifies and shows the interrelationship of each item of SSFF equipment and the interfaces with SSF and the furnace module.

1.1.4 OPERATIONAL FUNCTIONAL FLOWS

Preliminary functional flows are shown in Table 1.1-3 for each FO. Functional flows define the function performed, the performing element, and decisions involved in accomplishing each FO.

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 1 of 17)

FUNC	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TTTLE	ITEM
FO-1 Step 1	CCU and CMCU Activation	Core Control Unit
		Removable Hard Drive
		* CDROM/WORM Drive
İ		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM ·
		Essentials Power Supply
		Voltage and Current Sensors
FO-1 Step 2	SSFF to Ground Link	Core Control Unit
10151092		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
FO-1 Step 3	Test CMCU	Core Control Unit
10-1000	100.0	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
	4	Essentials Power Supply
		Voltage and Current Sensors
FO-1 Step 4	Configure and Test	Core Control Unit
1015.00	TCS in Core Rack	Removable Hard Drive
	100 27 0000 0.002	CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
	•	Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
1		TICSSUIC TIMISUUCCIS

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 2 of 17)

ETIMO	TIONAL OBJECTIVE	EQUIPMENT REQUIRED
	TITLE	ITEM
NUMBER	Test CPC	Core Control Unit
FO-1 Step 5	rest Cr C	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
j i		Essentials Power Supply
	Ì	Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Core Power Conditioners
		Core Control Unit
FO-1 Step 6	GDS Test	Removable Hard Drive
·		CDROM/WORM Drive
		LIE - Density Pecorder
		High-Density Recorder Core Monitor Control Unit
		Crew Interface
		CPCS RPCM
1		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
	•	Temperature Sensors
		Pressure Transducers
		Latching Solonoid Valves
		Contamination Monitor
FO-1 Step 7	Activate Camera and Videolink	NOT USED IN IC1
FO-1 Step 8	Core Readiness Check	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
1		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
	•	CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
•1		Pump Package

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 3 of 17)

FUN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TTTLE	ITEM
FO-1 Step 8	Core Readiness Check	Flow Meters
(Cont.)		Flow Control Valves
		Temperature Sensors •
		Pressure Transducers
FO-2 Step 1	CCU Powers RPCM/DCMU	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
1		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
FO-2 Step 2	CCU Powers FCU	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
	•	Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
}		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors Pressure Transducers
]		
		Distributed Core Monitoring Unit Furnace Control Unit
FO-2 Step 3	FCU Checkout	Core Control Unit
10-2 step 3	PCO Checkout	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
İ		Core Monitor Control Unit
		Crew Interface
		CPCS
İ		RPCM
		Essentials Power Supply

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 4 of 17)

FUNCTION	ONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ITEM
	FCU Checkout	Voltage and Current Sensors
FO-2 Step 3	1 CO Chockout	Shutoff Valves
(Cont.)		Pump Package
		Flow Meters
1		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
1		Furnace Control Unit
	EATIDownered	Core Control Unit
FO-2 Step 4	FAU Powered	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
1		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
İ		Essentials Power Supply
}		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
	_	Flow Meters
1		Flow Control Valves
		Temperature Sensors
1		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
1		Furnace Actuator Unit
FO-2 Step 5	FAU Checkout	Core Control Unit
1		Removable Hard Drive
İ		CDROM/WORM Drive
1		High-Density Recorder
1		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
1		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 5 of 17)

FUN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ПЕМ
FO-2 Step 6	Configure and Test TCS in	Core Control Unit
	Furnace Rack	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		. RPCM
		Essentials Power Supply
	•	Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducer
		Video Processor Unit
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
FO-2 Step 7	GDS Test	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
	· ·	Furnace Actuator Unit
		I WHILE FICULION OTHE

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 6 of 17)

EUN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ITEM
	Furnace-Specific Tests	Core Control Unit
FO-2 Step 8	Tumace-opecate Tesa	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
,		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
i		Furnace Control Unit
		Furnace Actuator Unit
FO-3 Step 1	Command Manual Sample Exchange	Core Control Unit
10-3 Step 1	Communic management	Removable Hard Drive
		CDROM/WORM Drive
	,	High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
l l		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
	•	Shutoff Valves
		Pump Package
•		Flow Meters
	·	Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 7 of 17)

FU	NCTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	TEM
FO-3 Step 2	Vent/Fill Furnace Module-1	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
1		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
FO 2 0		Furnace Actuator Unit
FO-3 Step 3	Equalize Furnace Module-1 Pressure	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
	· · · · · · · · · · · · · · · · · · ·	Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
		Manual Valve
FO-3 Step 4	Prep Equipment	Core Control Unit
_		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
,		Essentials Power Supply
		20001144410 I OWOI OUPPIY

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 8 of 17)

FUN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TTILE	ITEM
FO-3 Step 4	Prep Equipment	Voltage and Current Sensors
	Trop Edurpment	Shutoff Valves
(Cont.)		Pump Package
		Flow Meters
1		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
	O CID	Core Control Unit
FO-3 Step 5	Open SIP	Removable Hard Drive
	•	CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
	,	CPCS
		RPCM
1		Essentials Power Supply
	•	Value and Current Sensors
		Voltage and Current Sensors Shutoff Valves
		-
		Pump Package
		Flow Meters
		Flow Control Valves
1		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
FO-3 Step 6	Insert Samples	Core Control Unit
	•	Removable Hard Drive
j		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
1		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Val /eş
1		Temperature Sensors
		Pressure Transducers
1		Distributed Core Monitoring Unit
		Furnace Control Unit
	,	Furnace Actuator Unit
1	Í	L CLIMAN A ROUND TO THE PARTY OF THE PARTY O

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 9 of 17)

FUN	ICTIONAL OBJECTIVE	EQUIPMENT REQUIRED		
NUMBER	TITLE	ITEM		
FO-3 Step 7	Close SIP	Core Control Unit		
10-3 Step /	Close SIP	Removable Hard Drive		
		CDROM/WORM Drive		
		High-Density Recorder		
		Core Monitor Control Unit		
		Crew Interface		
		CPCS		
		RPCM		
		Essentials Power Supply		
		Voltage and Current Sensors		
		Shutoff Valves		
		Pump Package		
		Flow Meters		
		Flow Control Valves		
		Temperature Sensors		
		Pressure Transducers		
		Distributed Core Monitoring Unit		
		Furnace Control Unit		
		Furnace Actuator Unit		
FO-3 Step 8	Open Valves	Core Control Unit		
_	•	Removable Hard Drive		
		CDROM/WORM Drive		
		High-Density Recorder		
		Core Monitor Control Unit		
		Crew Interface		
		CPCS		
		RPCM		
		Essentials Power Supply		
		Voltage and Current Sensors		
		Shutoff Valves		
		Pump Package		
		Flow Meters		
		Flow Control Valves		
		Temperature Sensors		
		Pressure Transducers		
		Distributed Core Monitoring Unit		
		Furnace Control Unit		
		Furnace Actuator Unit		
		Manual Valves		
FO-3 Step 9	Command Manual	Core Control Unit		
10000p)	Sample Exchange Off	Removable Hard Drive		
	Sample Exchange Off	CDROM/WORM Drive		
		High-Density Recorder		
		Core Monitor Control Unit		
		Crew Interface		
		CPCS		
	•	RPCM		
		Essentials Power Supply		

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 10 of 17)

FUNCT	TONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ITEM
FO-3 Step 9	Command Manual	Voltage and Current Sensors
	Sample Exchange Off	Shutoff Valves
(Cont.)	Sample Ettings	Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
	·	Furnace Actuator Unit
10	Perform Seal Check	Core Control Unit
FO-3 Step 10	Perionii Seai Check	. Removable Hard Drive
		CDROM/WORM Drive
te.		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
		Furnace Actuator Cint
FO-4 Step 1	GN ₂ Purge Furnace	Core Control Unit
	-	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
1		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
į į		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
. 1		Control Unit
į l		Furnace Control Unit Furnace Actuator Unit

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 11 of 17)

FUI	NCTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	TEM TEM
FO-4 Step 2	Argon Backfill	Core Control Unit
	l segon succession	Removable Hard Drive
		CDROM/WORM Drive
	1	High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		- ·
		Essentials Power Supply Voltage and Current Sensors
		Shutoff Valves
		Pump Package.
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
FO 4 Sec. 2		Furnace Actuator Unit
FO-4 Step 3	Command Sample Process	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM .
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
FO . A		Furnace Actuator Unit
FO-4 Step 4	TCS Configured	Core Control Unit
	_	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
ľ		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		. Jimeo mid Cuitotti Delibots

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 12 of 17)

EIIN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ПЕМ
FO-4 Step 3	TCS Configured	Shutoff Valves Pump Package
(Cont.)		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
FO-5	Vapor Crystal Growth of HgCdTe	All equipment listed below
FO-6	Meltback and Regrowth of HgZnTe	All equipment listed below
FO-6a	Melthack and Regrowth of HgZn 16	All equipment listed below
FO-7	Growth of CdTe by Dir. Solidification	All equipment listed below
FO-8	Growth of GaAs by Dir. Solidification	All equipment listed below
100	,	Core Control Unit
		Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
•	1	Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors Shutoff Valves
)
		Pump Package Flow Meters
İ		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Distributed Core Monitoring Unit
		Furnace Control Unit
		Furnace Actuator Unit
		Furnace Module-1
		I WHILE IT CALLS I

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 13 of 17)

FUN	NCTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	TEM TEM
FO-9 Step 1	Verify Furnace in HOME Position	Core Control Unit
10 / 0.00	i dany i minace in Holvie i osidon	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
ĺ		Essentials Power Supply
	·	Voltage and Current Sensors
		Shutoff Valves
		Pump Package Flow Meters
		Flow Control Valves
		Temperature Sensors Pressure Transducers
		Distributed Core Monitoring Unit Furnace Control Unit
		Furnace Actuator Unit
		Furnace Module-1
FO-9 Step 2	Furnace-Specific Tests	Core Control Unit
10) Step 2	Turnace-specific Tests	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
		RPCM
		Essentials Power Supply
		Voltage and Current Sensors
		Shutoff Valves
		Pump Package
		Flow Meters
		Flow Control Valves
		Temperature Sensors
		Pressure Transducers
		Video Processor Unit
		Distributed Core Monitoring Unit
		Furnace Control Unit
ļ		Furnace Actuator Unit
		Furnace Module-1
FO-9 Step 3	Furnace-Specific Tests	Core Control Unit
	France 100m	Removable Hard Drive
		CDROM/WORM Drive
		High-Density Recorder
		Core Monitor Control Unit
		Crew Interface
		CPCS
 		CLCS

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 14 of 17)

FIN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ΠEM
FO-9 Step 3 (Cont.)	Furnace-Specific Tests	RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers Distributed Core Monitoring Unit Furnace Control Unit
		Furnace Actuator Unit Furnace Module-1
FO-10 Step 1	Distributed Equipment Shutdown	Core Control Unit Removable Hard Drive CDROM/WORM Drive High-Density Recorder Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers Core Control Unit
FO-10 Step 2	Verify Experiment Shutdown	Removable Hard Drive CDROM/WORM Drive High-Density Recorder Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers Distributed Core Monitoring Unit

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 15 of 17)

NUMBER FO-10 Step 3 Shut Down GDS Subsystems Core Control Unit Removable Hard Drive CDROM/WORM Drive High-Density Recorder Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown FO-10 Step 4 DMS Nonessentials Shutdown FO-10 Step 4 DMS Nonessentials Shutdown Essentials Power Supply Voltage and Current Sensors	FUN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
Removable Hard Drive CDROM/WORM Drive High-Density Recorder Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply		TITLE	
Removable Hard Drive CDROM/WORM Drive High-Density Recorder Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply	FO-10 Step 3	Shut Down GDS Subsystems	Core Control Unit
High-Density Recorder Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply		•	Removable Hard Drive
Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			CDROM/WORM Drive
Core Monitor Control Unit Crew Interface CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			High-Density Recorder
CPCS RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			Core Monitor Control Unit
RPCM Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			Crew Interface
Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			CPCS
Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			RPCM
FO-10 Step 4 DMS Nonessentials Shutdown Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			Essentials Power Supply
Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply	1		Voltage and Current Sensors
Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply	1		
Flow Control Valves Temperature Sensors Pressure Transducers FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			
FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			
FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			
FO-10 Step 4 DMS Nonessentials Shutdown Core Control Unit Core Monitor Control Unit RPCM Essentials Power Supply			Temperature Sensors
Core Monitor Control Unit RPCM Essentials Power Supply	FO 10 Sec. 4	DIVON	
RPCM Essentials Power Supply	FO-10 Step 4	DMS Nonessentials Shutdown	
Essentials Power Supply			
Voltage and Current Sensors			
Pump Package Flow Meters			
Flow Meters Flow Control Valves			
Temperature Sensors			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Pressure Transducers			
FO-10 Step 5 TCS Shutdown Core Control Unit	FO-10 Step 5	TCS Shutdown	
Core Monitor Control Unit		2 OO DIIBIGOWII	
Essentials Power Supply			
Voltage and Current Sensors			
FO-10 Step 6 CCU Shutdown	FO-10 Step 6	CCU Shutdown	, crage and current bensors

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 16 of 17)

FIN	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED		
NUMBER	TITLE	ITEM		
FO-11 Step 1	Activate Calibration/Bakeout	Core Control Unit		
1 Coll Step 1	71047410 0111011111111111111111111111111	Removable Hard Drive		
ł		CDROM/WORM Drive		
		High-Density Recorder		
		Core Monitor Control Unit		
		Crew Interface		
		CPCS		
		RPCM		
		Essentials Power Supply		
		Voltage and Current Sensors		
		Shutoff Valves		
		Pump Package .		
		Flow Meters		
		Flow Control Valves		
		Temperature Sensors		
		Pressure Transducers		
		Distributed Core Monitoring Unit		
		Furnace Control Unit		
·		Furnace Actuator Unit		
		Furnace Module-1		
FO-11 Step 2	Initiate Calibration Process	Core Control Unit		
1 0 11 July 2		Removable Hard Drive		
		CDROM/WORM Drive		
		High-Density Recorder		
		Core Monitor Control Unit		
		Crew Interface		
		CPCS		
		RPCM		
		Essentials Power Supply		
		Voltage and Current Sensors		
		Shutoff Valves		
	•	Pump Package		
		Flow Meters		
		Flow Control Valves		
		Temperature Sensors		
		Pressure Transducers		
		Distributed Core Monitoring Unit		
		Furnace Control Unit		
		Furnace Actuator Unit		
		Furnace Module-1		
FO-11 Step 3	Bakeout Process	Core Control Unit		
		Removable Hard Drive		
		CDROM/WORM Urive		
		High-Density Recorder		
		Core Monitor Control Unit		
		Crew Interface		
		CPCS		
		· RPCM		

TABLE 1.1-1. SSFF FUNCTIONAL OBJECTIVES (Sheet 17 of 17)

FUNC	CTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ΠΈM
FO-11 Step 3 (Cont.)	Bakeout Process	Essentials Power Supply Voltage and Current Sensors Shutoff Valves Pump Package Flow Meters Flow Control Valves Temperature Sensors Pressure Transducers Distributed Core Monitoring Unit Furnace Control Unit Furnace Actuator Unit Furnace Module-1

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 1 of 19)

			Space Station Furnace Facility Activation			PRENEZUIOI. G.			
O OF	PERFOR	MAN	CES: MINDES						
EQUIR	ED TIME	FRAM	E (MET): MIN MAX			JOINT	OPS WIT	Н:	<u></u>
				1	2	3	4	5	6
STEP NUMBER MINIMUM									
STEP DURATION (MINS:SECS)		ON	MAXIMUM						
			PREFERRED	5:00	5:00	1:00			
			MINIMUM						
STEP	DELAY		MUMIXAM						
(HRS:MINS)			PREFERRED						
			NUMBER						
CREW			PREFERRED						
MICROGRAVITY (g's)							 		
VACUUM VENT									
CONSUMABLES									
AVERAGE POWER REQUIRED (kW)			0.00	0.00	0.00			-	
	ONBOARD CORE APPLICATIONS		<u> </u>						
COMPUTER SUPPORT EXPERIMENT		EXPE	RIMENT APPLICATIONS					 	
			IGITAL (MBPS)			<u> </u>		 	-
		REAL-TIME (RT) OR DUMP (D)			-	╁			
	•	COMMANDING PES (P), ISE (I), MPAC (M), POIC (PC)				·			
DATA	VIDEO	VIDEO							
	STANDARD/NONSTANDARD NTSC								
	1		DUMP/STORE	-		 			
SPECI	AL EQUI	PMEN	T OR CONSTRAINTS				<u></u>		
SI	EP NO.	_	TOO a continuity of	STEP D	ESCRIPTION	<u> </u>			
	1	•	n TCS manual valves						
	2	•	n GDS manual valves						
	3	Veri	fy Station services activated at rack						

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 2 of 19)

EXPE	EXPERMENT NAME: Space Station Furnace Facility FO NUMBER: 1									
ı	FO NAME: Core Activation									
NO.	OF PERF	ORMAN	ICES: MINDES.							
REQU	JIRED TI	JEFRAI	ME (MET): MIN MAX.	JOINT OPS WITH:						
STEP NUMBER				1	2	3	4	5	6	
675	D DUDA	T10.11	MINIMUM							
STEP DURATION (MINS:SECS)			MAXIMUM							
			PREFERRED	5:00	2:00	1:00	4:00	3:00	7:00	
			MINIMUM							
	P DELAY S:MINS)	,	MAXIMUM							
			PREFERRED							
	CREW		NUMBER							
	PREFERRED									
MIC	MICROGRAVITY (g's)									
VACUUM VENT			<u> </u>							
CONSUMABLES										
AVERAGE POWER REQUIRED (kW)		1.008	1.008	1.008	1.1479	1.4637	1.2926			
ONBOARD CO		CORE	CORE APPLICATIONS							
	PORT		RIMENT APPLICATIONS							
	1		GITAL (MBPS)							
			OR DUMP (D)							
	COMMA									
DATA	VIDEO	195 (1), MPAC (M), POIC (PC)							
		RD/NO	NSTANDARD NTSC							
	REAL-T	ME/DU	JMP/STORE							
SPECIA	AL EQUI	MENT	OR CONSTRAINTS							
STEP NO.		STEP DESCRIPTION								
1 Activate CCU and CMCU										
	2	SSF to ground initial link								
	3	Test CI	MCU							
	4	Configu	ure and test TCS in Core		-					
	5	Test Ci	PC							
	6	GDS te	sts in Core							

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 3 of 19)

EXPERMENT NAME: Space Station Furnace Facility FO NAME: Core Activation NO. OF PERFORMANCES: MIN						PREREC SEQUEN	BER: 1 NUISITE:FO-0 NCE:	
"EGG	INCD III	LI IIA	nt (mti). mix moo.			00111110	ru	
STEP NUMBER 7 8								
			MINIMUM					
	STEP DURATION (MINS:SECS)		MAXIMUM					
,	•		PREFERRED	3:00	5:00			
			MINIMUM					
	P DELAY S:MINS)		MAXIMUM					
```	J	•	PREFERRED					
	CREW		NUMBER					
] `	J., L.,		PREFERRED					
MIC	MICROGRAVITY (g's)							
VAC	VACUUM VENT							
CONSUMABLES								
AVERAGE POWER REQUIRED (kW)			1.1479	1.1479				
•	ONBOARD COMPUTER SUPPORT CORE APPLICATIONS EXPERIMENT APPLICATIONS		APPLICATIONS					
			RIMENT APPLICATIONS					
	DOWNLI	NK DI	GITAL (MBPS)					
	REAL-TI	ME (R	T) OR DUMP (D)					
	COMMA							
DATA	PES (P),	ISE (	), MPAC (M), POIC (PC)	<b></b>				_
	VIDEO STANDA	RD/NC	DNSTANDARD NTSC					
	REAL-T	ME/D	UMP/STORE					
SPECI	AL EQUIP	MENT	OR CONSTRAINTS					
SI	<b>EP NO.</b> 7 8		te camera and test videolink and hi		SCRIPTION at used during			

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 4 of 19)

EXPERMENT NAME: Space Station Furnace Facility  FO NAME: Distributed Equipment  NO. OF PERFORMANCES: MIN DES SEQUENCE:  REQUIRED TIMEFRAME (MET): MIN MAX JOINT OPS WITH:									
STEP NUMBER				1	2	3	4	5	6
STEP DURATION (MINS:SECS)		ION	MINIMUM MAXIMUM PREFERRED	1:00	2:00	2:00	2:00	2:00	5:00
STEP DELAY (HRS:MINS)			MINIMUM  MAXIMUM  PREFERRED						
CREW			NUMBER PREFERRED						
MICROGRAVITY (g's)									
VACI	UUM VEN	IT							
CONSUMABLES							0.0000	2.0988	2.1136
AVERAGE POWER REQUIRED (kW)			1.3220	1.7620	1.7620	2.0988	2.0988	2.1130	
COMPUTER			RIMENT APPLICATIONS						
307	DOWNLINK DIGITAL (MBPS) REAL-TIME (RT) OR DUMP (D) COMMANDING								
DATA	PES (P), ISE (I), MPAC (M), POIC (PC)  VIDEO STANDARD/NONSTANDARD NTSC  REAL-TIME/DUMP/STORE						·		
SPECIAL EQUIPMENT OR CONSTRAINTS									
STEP NO.				STEP DESCRIPTION					
1 CCU activates RPCM									
	2	ccu	activates FCU						
	3	FCU	checkout						
	4	FAU	activation						
	5`	FAU	checkout						
	6	ccu	configuration of TCS						

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 5 of 19)

O NAI	ME: <u>Dis</u> PERFOR	tribu MAN	Space Station Furnace Facilited Equipment CES: MIN DES IE (MET): MIN MAX		<del>-</del>	PRER SEQU	EQUISIT	2 E: <u>FO-1</u> TH:	
TEP N	UMBER			7	8				
			MINIMUM					ļ	-
	DURATION (SECS)	ОИ	MAXIMUM						
(MINS	1:3503/		PREFERRED	:17	12:00				
	MINIMUM		MINIMUM						
	STEP DELAY MAXIMUM								
(HRS	(HRS:MINS) PREFERRED								<u> </u>
	REW		NUMBER					<del> </del> -	<del> </del>
C	U E 14		PREFERRED						
MICR	OGRAVIT	Y (g'	s)						
VACL	JUM VEN	T							
CON	SUMABL	ES					ļ		
AVEF	RAGE PO	WER	REQUIRED (kW)	2.1835	2.1336				
ONB	OARD	CORI	APPLICATIONS				ļ		
COM	DUTED !	EXPE	RIMENT APPLICATIONS						
	DOWNLI	NK D	IGITAL (MBPS)				<b></b>		
	REAL-TI	ME (F	RT) OR DUMP (D)		<b> </b>	<b> </b>			
	COMMA						+		
DATA		ISE	(I), MPAC (M), POIC (PC)		<del> </del>		1		
	VIDEO STANDA	RD/N	IONSTANDARD NTSC		1		<del> </del>		
	REAL-T	IME/I	DUMP/STORE			<u> </u>	<u> </u>		
SPECI	AL EQUI	PMEN	T OR CONSTRAINTS		<u> </u>				
<u>\$</u> 1	7 8		ckout GDS components nace specific tests	STEP D	ESCRIPTIC	<u>ON</u>			·

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 6 of 19)

EXP	EXPERMENT NAME: Space Station Furnace Facility FO NUMBER: 3									
			Sample Exchange		<u> </u>	PRE	REQUISIT	E: <u>FO-2</u>		
l			ICES: MINDES	·		SEQ	UENCE: _			
REQU	JIRED TIA	4EFRA	ME (MET): MIN MAX.			JOIN.	T OPS WIT	ГН:	<del></del>	
STEP	NUMBER	· · · · · ·		1	2	3	4	5	6	
			MINIMUM			<u> </u>	-			
	P DURA		MAXIMUM							
\		<b>'</b>	PREFERRED	1:00	32:00	10:00	10:00	7:00	20:00	
			MINIMUM							
	P DELAY S:MINS)	,	MAXIMUM							
(,,,,,	<b></b>		PREFERRED							
	CREW		NUMBER							
			PREFERRED	1		1	1	1	1	
MIC	ROGRAVI	TY (g's	0)							
VAC	VACUUM VENT									
CON	CONSUMABLES									
AVERAGE POWER REQUIRED (kW)			2.1336	2.1487	2.1336	2.1336	2.1336	2.1336		
_	SOARD APUTER	CORE	APPLICATIONS							
	PORT		RIMENT APPLICATIONS							
	l .		GITAL (MBPS)				-			
			) OR DUMP (D)		(					
	COMMA		), MPAC (M), POIC (PC)							
DATA	VIDEO	195 (1	), MPAC (M), POIC (PC)							
	1	RD/NO	NSTANDARD NTSC							
	REAL-T	ME/DU	JMP/STORE							
SPECI	AL EQUII	MENT	OR CONSTRAINTS						-	
SI	EP NO.			STEP DE	SCRIPTION	4 				
	1	Commi	and "Manual Sample Exchange" on	1					Ī	
	2	Vent/fil	I furnace module		_					
	3	Equaliz	te furnace module pressure		•					
	4	Prep e	quipment							
	5	Open S	SIP		•					
6 Insert samples										

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 7 of 19)

	EXPERMENT NAME: Space Station Furnace Facility FO NUMBER: 3  FO NAME: Manual Sample Exchange PREREQUISITE: FO-2									
			Sample Exchange   CES: MIN DES	_				: <u>FO-2</u>		
L			ME (MET): MIN MAX					———— ТН:		
		15. 117.	\me :/.	<del></del>		50	. 0.0			
STEP	NUMBER			7	8	9	10	11		
			MINIMUM							
1	P DURAT Is:Secs)		MAXIMUM ·							
			PREFERRED	3:00	3:00	1:00	65:00	4:00		
			MINIMUM							
	P DELAY S:MINS)	,	MAXIMUM							
	- · · · · · · · · · · · · · · · · · · ·		PREFERRED							
	CREW		NUMBER							
			PREFERRED	1	1	1	1	1		
MIC	ROGRAVI	TY (gʻs	B)							
VAC	UUM VE	NT								
CON	SUMABL	.ES								
AVE	RAGE PO	WER	REQUIRED (kW)	2.1336	2.1336	2.1336	2.1338	2.1336		
	טאאט	CORE	APPLICATIONS							
	PORT	EXPE	RIMENT APPLICATIONS							
	DOWNL	NK DI	GITAL (MBPS)							
	REAL-TI	ME (R	T) OR DUMP (D)							
	COMMA				ļ				<u> </u>	
DATA	}	, ISE (	I), MPAC (M), POIC (PC)							
	VIDEO STANDA	RD/NO	DETANDARD NTSC							
	REAL-T	IME/D	UMP/STORE					!		
SPECI	AL EQUI	PMENT	OR CONSTRAINTS							
SI	EP NO.			STEP DE	SCRIPTIO	N				
STEP NO. STEP DESCRIPTION 7 Close SIP						_				
	8	Open	valves							
	9	Comm	nand "Manual Sample Exchange" of	f					1	
	10	Perfor	m seal check							
	11	Load	ist process							

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 8 of 19)

FO NA	ME: <u>P</u>	rge F	Space Station Furnace Facilifurnace Module CES: MIN DES IE (MET): MIN MAX		<del>-</del>	PRER SEQU	JMBER: 4 EQUISITE: ENCE: OPS WITH	FO-3	
STEP N	UMBER			1	2	3	4	5	6
	DURAT S:SECS)	ION	MINIMUM MAXIMUM PREFERRED	32:00	10:00	2:00	2:00	``	
	STEP DELAY (HRS:MINS)  PREFERRED								
С	CREW NUMBER PREFERRED								
VACI	OGRAVIT	(T	s)						
	SUMABL			0.1497	2,1487	2,1336	2.1639		
AVE			REQUIRED (kW)	2.1487	2.1467	2.1000	2005		
COM	PILTER		RIMENT APPLICATIONS						
	REAL-TI	ME (R						•	
DATA	VIDEO STANDA	ARD/N	ONSTANDARD NTSC						
SPECI	AL EQUI	PMEN	T OR CONSTRAINTS						
	STEP_NO.  1 GN2 purge furnace  2 Argon backfill  3 Command sample process  4 TCS configured				ESCRIPTIO	DN .			

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 9 of 19)

			Space Station Furnace Facilit					5 :FO-3	1
			rystal Growth of HgCdTe		<del></del>			:FU-3	
			CES: MINDES					н:	1
REQUI	RED TIME	FRAM	E (MET): MIN MAX			JOINT	UPS WII	n	
STEP	NUMBER			1	2	3	4	5	6
			MINIMUM						
	DURATI S:SECS)	ON	MAXIMUM						
(	0.0200,		PREFERRED	3:00	188:00	60:00	480:00	240:00	21:00
			MINIMUM						
	DELAY		MAXIMUM						
,,,,,,	PREFERRED								
_	REW		NUMBER						
	PREFERRED								
MICE	OGRAVIT	Y (g'	5)						
VAC	UUM VEN	T							
CON	CONSUMABLES								
AVE	RAGE PO	WER	REQUIRED (kW)	2.2536	3.2496	2.5996	2.5996	2.2536	2.536
ONB	OARD	CORE	APPLICATIONS						
-	PORT	EXPE	RIMENT APPLICATIONS						
	DOWNLI	NK DI	GITAL (MBPS)						
			T) OR DUMP (D)						
	COMMA		·		<del> </del>				
DATA		135	(I), MPAC (M), POIC (PC)		<del>                                     </del>	1			
	VIDEO STANDA	RD/N	ONSTANDARD NTSC						
	REAL-T	ME/D	UMP/STORE					ļ	
SPECI	AL EQUII	MEN.	T OR CONSTRAINTS				L	<u> </u>	<u> </u>
SI	EP NO.			STEP D	ESCRIPTIO	<u>N</u>			
	1	Activ	ate furnace for processing						
2 Activate and process heat cycle									
	3	Anne	ai sample						
4. Initiate vapor crystal growth processing									
	5	Cool	sample and extract						
	6	Cool	and stow						
1									

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 10 of 19)

EXPE	RMENT I	NAME:	Space Station Furnace Fac	cility FO NUMBER: 6					
			k and Regrowth of HgZnTe				REQUISITE		
NO.	OF PERFO	RMAN	CES: MINDES.			SEQ	JENCE:		
REQL	IRED TIM	EFRAL	ME (MET): MIN MAX.			JOINT	OPS WIT	ዝ፡	
STED	NUMBER			T 1	2	3		5	6
0.2	NOMBER		MINIMUM	<del>                                     </del>	-	,	4	3	•
_	P DURAT		MAXIMUM						
(#11	VS:SECS)		PREFERRED	3:00	340:00	120:00	125:00	600:00	7390:00
	<del></del>		MINIMUM						
	P DELAY		MAXIMUM	<del>                                     </del>					
(nn	S:MINS)	•	PREFERRED						
	CREW NUMBER								
	PREFERRED								
MICROGRAVITY (g's)									
VACUUM VENT									
CONSUMABLES									
AVE	RAGE PO	WER	REQUIRED (kW)	2.2536	2.7316	2.6496	2.6496	2.6496	2.6496
	OAND	CORE	APPLICATIONS						
	PUTER	EXPE	RIMENT APPLICATIONS						
	DOWNLI	NK DIG	GITAL (MBPS)					:	
	REAL-TI	AE (RT	OR DUMP (D)						
	COMMA			ļ					
DATA	VIDEO	ISE (I	), MPAC (M), POIC (PC)	-					
		RD/NO	NSTANDARD NTSC						
	REAL-TI	ME/DU	JMP/STORE						
SPECI	AL EQUIP	MENT	OR CONSTRAINTS						
SI	EP NO.			STEP DE	SCRIPTIO	<u> </u>			·
	1	Activat	te furnace for processing						
	2	Proces	ss heat cycle						
	3	Initial s	o <b>a</b> k						
	4	Transla	ation to growth position						
	5	Final so	pak						
	6	Direction	onal solidification						}
•									. ]

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 11 of 19)

FO NA	RMENT NAME: Me F PERFOI	eitbaci RMAN	PRER Sequ	EQUISITE	6 : <u>FO-3</u> H:					
STEP	NUMBER			7	8					
			MINIMUM							
	DURATI S:SECS)	ON	MAXIMUM							
(100114	J.3EU3)		PREFERRED	372:00	115:00					
			MINIMUM							
	DELAY S:MINS)	ļ	MAXIMUM							
			PREFERRED							
	REW		NUMBER							
			PREFERRED					-		
MICE	ROGRAVIT	Y (g's	3)							
VAC	UUM VEN	Т								
CON	SUMABL	ES								
			REQUIRED (kW)	2.3246	2.1946			- 1		
		CORE	APPLICATIONS							
	PORT	EXPE	RIMENT APPLICATIONS							
	DOWNLIN	IK DI	GITAL (MBPS)							
	REAL-TIM	IE (R	T) OR DUMP (D)							
	COMMA									
DATA		ise (	I), MPAC (M), POIC (PC)							
	VIDEO STANDA	RD/NO	ONSTANDARD NTSC							
	REAL-TI	ME/D	UMP/STORE							
SPECI	AL EQUIP	MENT	OR CONSTRAINTS							
STEP NO.  7 Cool sample  8 Stow sample										

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 12 of 19)

FO NA	FO NAME: Space Station Furnace Facility  FO NAME: Meltback and Regrowth of HgZnTe (Extended)  PREREQUISITE: FO-3  SEQUENCE:  REQUIRED TIMEFRAME (MET): MIN MAX JOINT OPS WITH:										
STEP	NUMBER			1	2	3	4	5	6		
			MINIMUM								
	DURAT S:SECS)		MAXIMUM								
,			PREFERRED	3:00	340:00	120:00	125:00	600:00	59957:00		
			MINIMUM								
	DELAY		MAXIMUM								
(HKS	S:MINS)		PREFERRED								
	CREW		NUMBER								
	)		PREFERRED								
MICE	ROGRAVIT	ΓΥ (g's	s)								
VAC	UUM VER	NT.									
CON	SUMABL	.ES									
AVE	RAGE PO	WER	REQUIRED (kW)	2.2536	2.7316	2.6496	2.6496	2.6496	2.6496		
	OARD	CORE	APPLICATIONS								
	PORT	EXPE	RIMENT APPLICATIONS								
	DOWNL	NK DI	GITAL (MBPS)								
	REAL-TI	ME (R	n or dump (D)						<u> </u>		
	COMMA					_					
DATA		ISE (	I), MPAC (M), POIC (PC)	1				<u> </u>			
	VIDEO STANDA	RD/NO	DNSTANDARD NTSC								
	REAL-T	IME/D	UMP/STORE	1							
SPECI	AL EQUI	PMENT	OR CONSTRAINTS								
SI	EP NO.			STEP DE	SCRIPTIO	N					
	. 1	Activa	te furnace for processing								
	2	Proce	ss heat cycle								
	3	Initial	soak								
	4	Trans	lation to growth position								
	5	Final s	soak						i		
	6	Direct	ional solidification								

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 13 of 19)

FO NAM	IE: <u>Moltba</u> PERFORMA	:: Space Station Furnace Facilities and Regrowth of HgZnTe	(Extended)	_	PRER SEQU	EQUISITI ENCE: _	6 A E: <u>FO-3</u> TH:	1
REQUIR	ED TIMEFRA	AME (MET): MIN MAX.			T		_	
STEP N	UMBER		7	8				
	DURATION :SECS)	MINIMUM MAXIMUM						
(		PREFERRED	372:00	115:00			-	
		MINIMUM						
	DELAY MINS)	MAXIMUM						
	PREFERRED						<del> </del>	-
С	REW	NUMBER						+
		PREFERRED	<del>- </del>					
	OGRAVITY	(g's)						
	UM VENT							
	SUMABLES		0.0048	2.1946			1	
AVER		R REQUIRED (kW)	2.3248	2.1940				
		RE APPLICATIONS					_	
		PERIMENT APPLICATIONS				<u> </u>		
		DIGITAL (MBPS)	<u> </u>	<del> </del>	}		_	
		(RT) OR DUMP (D)				1		
	COMMAND	E (I), MPAC (M), POIC (PC)		<del>                                     </del>				
DATA	VIDEO	O/NONSTANDARD NTSC						
	l .					•		
		E/DUMP/STORE		+				
SPECI	AL EQUIPM	ENT OR CONSTRAINTS						
SI	EP NO.		STEP D	ESCRIPTION	ON			
	7 0	cool sample						
	8 la	nternally stow sample						
				_				

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 14 of 19)

FO N	EXPERMENT NAME: Space Station Furnace Facility  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER: 7  FO NUMBER:											
				4	·							
STEP	NUMBER	-		1	2	3	4	5	6			
STE	P DURAT	ION	MINIMUM	<u> </u>								
(MI	NS:SECS)		MAXIMUM									
			PREFERRED	3:00	538:00	120:00	4278:00	438:00	208:00			
			MINIMUM									
	P DELAY S:Mins)		MAXIMUM									
	_		PREFERRED									
(	CREW		NUMBER									
			PREFERRED									
MIC	ROGRAVIT	Y (g's	3)									
VAC	UUM VEN	IT										
CON	CONSUMABLES											
AVE	AVERAGE POWER REQUIRED (kW)			2.2536	3.4786	3.3746	3.2996	2.7244	2.3746			
	OARD	CORE	APPLICATIONS									
SUP	PORT		RIMENT APPLICATIONS									
	ŀ		GITAL (MBPS)		•.							
			) OR DUMP (D)									
	COMMA											
DATA	VIDEO	15E (1)	), MPAC (M), POIC (PC)									
		RD/NO	NSTANDARD NTSC									
	REAL-TI	ME/DU	IMP/STORE									
SPECIA	AL EQUIP	MENT	OR CONSTRAINTS									
SI	EP NO.			STEP DE	SCRIPTION	1						
	1	Activate	e furnace module for processing									
	2 Process heat cycle											
	3	Soak										
	4	Process	s sample, directional solidification									
	5	Cool sa	imple to 400 °C									
	6	Cool sa	mple to 200 °C and internally stow s	sample								

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 15 of 19)

FO N/ NO. O	AME: <u>Gr</u>	AME: Space Station Furnace Fac owth of GaAs by Directional Soli RMANCES: MIN DES FRAME (MET): MIN MAX	Idification PREREQUISITE: <u>FO-3</u> SEQUENCE:						
STEP	NUMBER		1	2	3	4	5	6	
	P DURATION (SECS)	MAXIMUM					700.00	210:00	
		MINIMUM	3:00	45:00	227:00	68:00	720:00	210:00	
	P DELAY S:MINS)	MAXIMUM PREFERRED					: 		
(	CREW	NUMBER PREFERRED							
MICE	ROGRAVITY	f (g's)				•			
VAC	UUM VEN	T							
CON	SUMABLE	S	_	ļ					
AVE		VER REQUIRED (kW)	2.2536	2.9916	4.4866	3.4776	3.3926	2.8016	
		CORE APPLICATIONS							
	PORT	EXPERIMENT APPLICATIONS							
	DOWNLIN	K DIGITAL (MBPS)				•			
		E (RT) OR DUMP (D)							
Ì	COMMAN	IDING ISE (I), MPAC (M), POIC (PC)							
DATA	VIDEO	RD/NONSTANDARD NTSC							
	REAL-TH	ME/DUMP/STORE			•				
SPECI	AL EQUIP	MENT OR CONSTRAINTS							
SI	EP NO.		STEP DE	SCRIPTIC	N				
	1	Activate furnace module processing							
	2	Preheat cycle							
	3	Process heat cycle							
	4	Soak							
	5	Translate furnace/process sample							
	6	Cool down to 800 °C							

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 16 of 19)

FO NA	ME: <u>G</u> F PERFO	rowth RMAN	Space Station Furnce Facility of GaAs by Directional Solid CES: MIN DES.	dification		PREF	EQUISIT	8 E: <u>FO-3</u> ITH:	
STEP	NUMBER			7					
			MINIMUM						
	DURATI S:SECS)	ON	MAXIMUM						
<b>,</b>	,		PREFERRED	466:00					
			MINIMUM						
	HRS:MINS)								
	PREFERRED								
C	REW		NUMBER						
			PREFERRED						
MICE	ROGRAVIT	Υ (g'	\$)			•			
VAC	UUM VEN	T							
CON	SUMABL	ES						_	
AVE	RAGE PO	WER	REQUIRED (kW)	2.2536					
ONB	OARD	CORE	APPLICATIONS						
	PUTER	EXPE	RIMENT APPLICATIONS						
	DOWNLI	NK DI	GITAL (MBPS)						
	REAL-TI	JE (R	T) OR DUMP (D)						
	COMMA						<b> </b>	_	
DATA		15E (	(I), MPAC (M), POIC (PC)	<del></del>					
	VIDEO STANDA	RD/N	ONSTANDARD NTSC						
	REAL-TI	ME/D	UMP/STORE						
SPECI	AL EQUIF	MEN.	T OR CONSTRAINTS						
ST	EP NO.			STEP DE	SCRIPTIO	N			
	7	Cool	down to 200 °C and internally stow	•					
				,					

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 17 of 19)

FO NA	ME: <u>C</u>	onflau	Space Station Furnace Facili re Furnace for Shutdown/Sa CES: MIN DES	mple Loadi		PRER	EQUISITE	9	
			IE (MET): MIN MAX					Н:	
STEP	NUMBER			1	2	3	4	5	6
STEP DURATION (MINS:SECS) MINIMUM MAXIMUM									
PREFERRED  MINIMUM  STEP DELAY (HRS:MINS)  MAXIMUM		MINIMUM MAXIMUM	3:00	5:00	1:00				
· c	PREFERRED  NUMBER  PREFERRED								
	OGRAVIT		•)						
	JUM VE								
	SUMABL			<u> </u>					
AVE	RAGE PO		REQUIRED (kW)	2.1336	2.1336	2.1336			
COM	ONBOARD COMPUTER SUPPORT EXPERIMENT APPLICATIONS								
DOWNLINK DIGITAL (MBPS) REAL-TIME (RT) OR DUMP (D) COMMANDING									
VIDEO			I), MPAC (M), POIC (PC)  ONSTANDARD NTSC						
	REAL-T	IME/D	UMP/STORE				!   		
SPECIA	AL EQUI	PMEN1	OR CONSTRAINTS						
	EP NO. 1 2 3	Verify	furnace is in home position ace specific tests secures power from furnace module		SCRIPTIO	N			
								_	

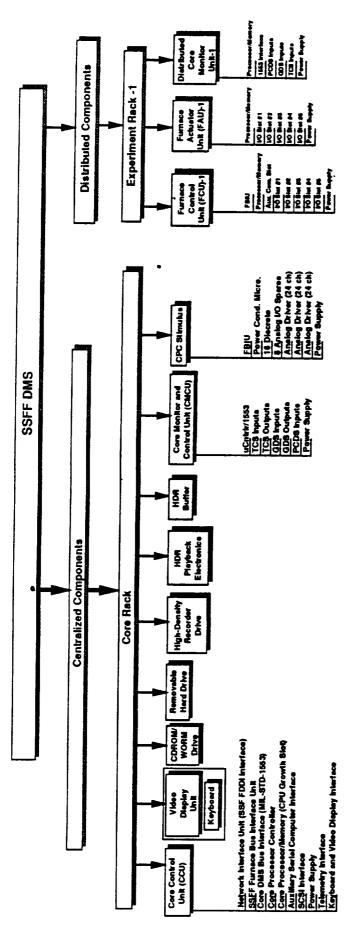
TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 18 of 19)

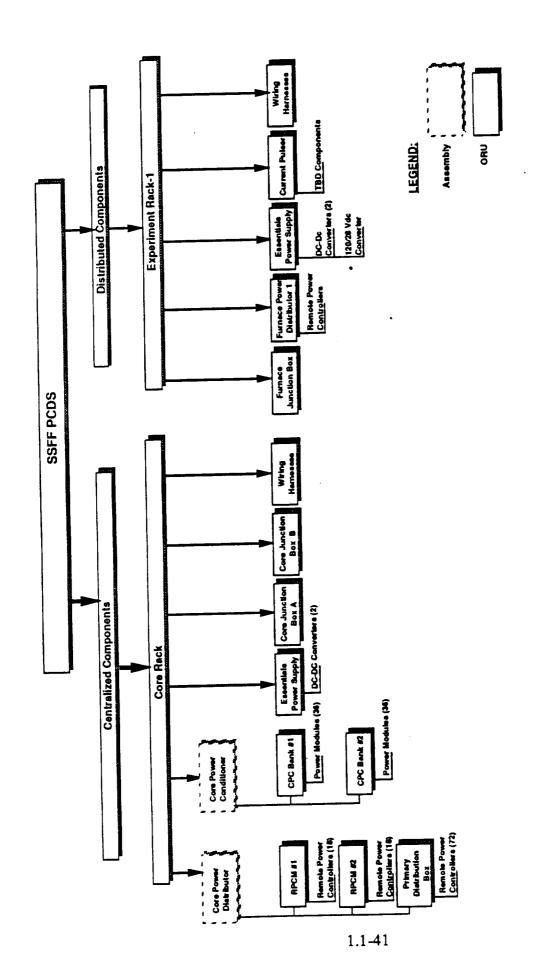
FO NA	AME: <u>S</u> F PERFO	SFF S	Space Station Furnace Facili Shutdown CES: MIN DES IE (MET): MIN MAX			PRER SEQU	EQUISITE	1 0 ::FO-9 H:	
STEP	NUMBER			1	2	3	4	5	6
STEP DURATION (MINS:SECS) MINIMUM									
			PREFERRED	3:00	3:00	5:00	1:00	1:00	1:00
MINIMUM									
	STEP DELAY (HRS:MINS)		MAXIMUM						
•	·		PREFERRED						
c	REW		NUMBER Preferred						
MICE	OGRAVI	TY (g':	3)						
VAC	UUM VEI	NT							
CON	SUMABL	.ES				,			
AVERAGE POWER REQUIRED (kW)		1.1479	1.1479	1.1479	0.5612	0.3102	0.00		
ONBOARD COMPUTER SUPPORT CORE APPLICATIONS EXPERIMENT APPLICATIONS									
	DOWNL	NK DI	GITAL (MBPS)						
	REAL-TI	ME (R	) OR DUMP (D)						
	COMMA		•						
DATA	VIDEO	, ISE (	i), MPAC (M), POIC (PC)						
		RD/NO	ONSTANDARD NTSC						
	REAL-T	IM E/D	UMP/STORE						
SPECIA	AL EQUI	PMENT	OR CONSTRAINTS						
SI	EP NO.		,	STEP DE	SCRIPTIO	N			
	1	Distril	outed Core Eq. shutdown						
·	2	Verify	experiment/furnace shutdown						
	3	GDS	shutdown						
	4	DMS	nonessential shutdown						
	5	TCS :	shutdown						
	6	CCU	shutdown						

TABLE 1.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 19 of 19)

EXPERMENT NAME: Space Station Furnace Facility  FO NAME: Furnace Calibration/Bakeout  NO. OF PERFORMANCES: MIN DES				FO NUMBER: 11  PREREQUISITE: FO-3  SEQUENCE:				
IO. OF	PERFORMA ED TIMEFRA	NCES: MINBES AME (MET): MINMAX					ዝ፡	
TEP N	UMBER		1	2	3	4	5	6
STEP DURATION (MINS:SECS)  MINIMUM  MAXIMUM  PREFERRED								
		MAXIMUM						
		PREFERRED	1:00	TBO	480:00			-
MINIMUM								
	DELAY	MAXIMUM						
(ннэ:	MINS)	PREFERRED						ļ
	REW	NUMBER				<u> </u>	<b></b>	+
C	new	PREFERRED			<b></b>			
MICR	OGRAVITY	(g's)						
VACU	UM VENT				-	<u> </u>		+
CONS	SUMABLES				ļ			-
AVER	AGE POWE	R REQUIRED (kW)	2.1336	TBD	TBD		<del> </del>	
ONBOARD CORE APPLICATIONS COMPUTER SUPPORT EXPERIMENT APPLICATIONS				<b></b>				
		PERIMENT APPLICATIONS						
	DOWNLINK	DIGITAL (MBPS)				<del> </del>		
	REAL-TIME	(RT) OR DUMP (D)		<u> </u>				
,	COMMAND			<b> </b>				
DATA		E (I), MPAC (M), POIC (PC)	_					
	VIDEO STANDARI	NONSTANDARD NTSC			<del> </del>			
	REAL-TIM	E/DUMP/STORE				ļ		
SPECI	AL EQUIPM	ENT OR CONSTRAINTS		<u> </u>	<u></u>	<u> </u>		
ST	EP NO.		STEP D	ESCRIPT	ION			
1 Activate calibration/bakeout								
2 Initiate calibration 3 Bakeout/calibration process								







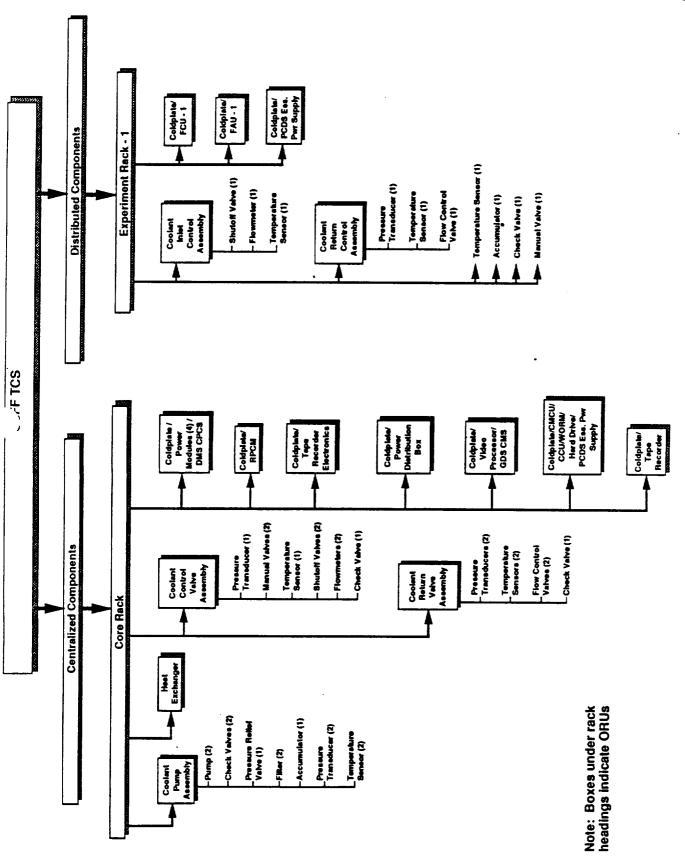


FIGURE 1.1-4. TCS COMPONENT TREE

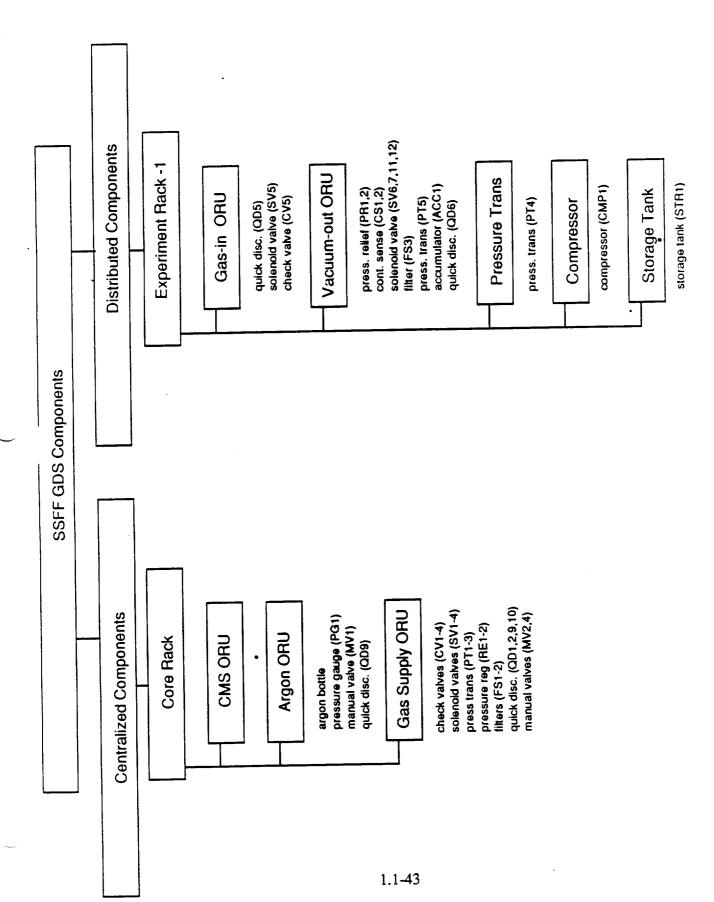


FIGURE 1.1-5. GDS COMPONENT TREE

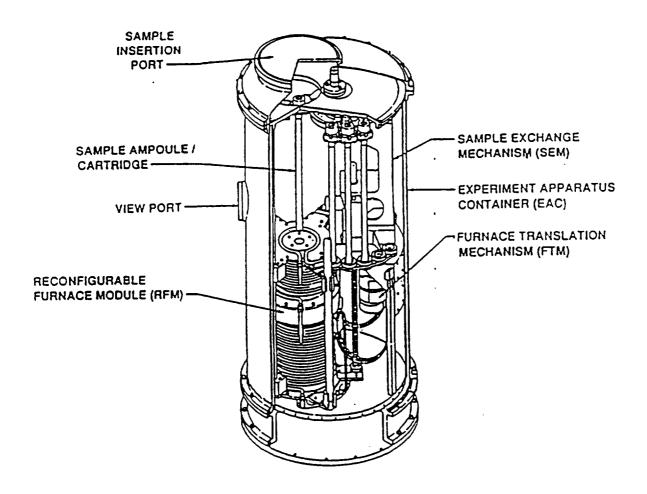
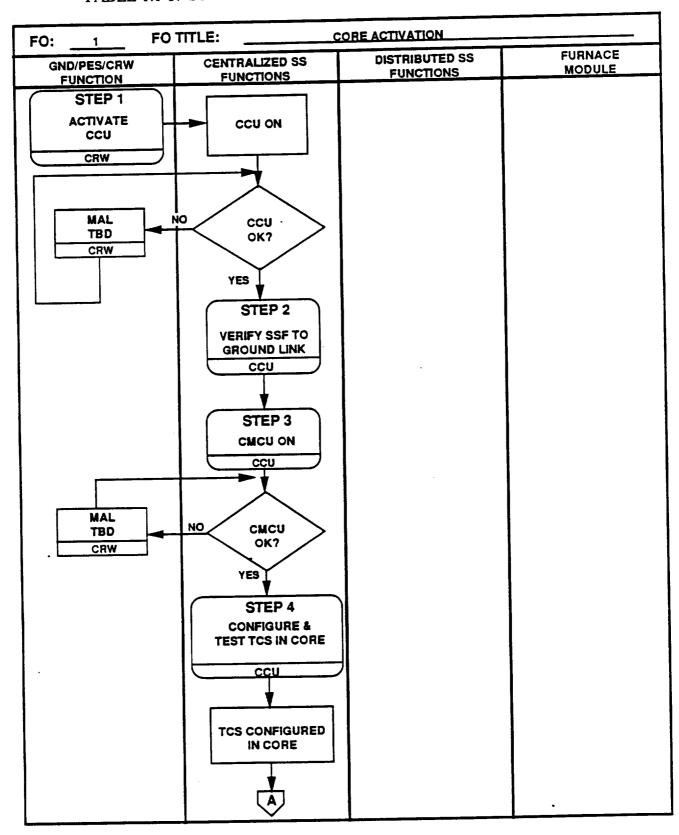


FIGURE 1.1-6. FURNACE MODULE-1 EQUIPMENT PICTORIAL REPRESENTATION

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 1 of 19)

GND/PES/CRW	CENTRALIZED SS FUNCTIONS	DISTRIBUTED SS FUNCTIONS	FURNACE MODULE
STEP 1 OPEN TCS MANUAL VALVE			
CRW			
			•
STEP 2			
OPEN GDS MANUAL VALVE	•		
CRW	·		
STEP 3 VERIFY SSF			
SERVICES AT RACK			
CRW			
<u> </u>			
END OF FO-0 PROCEED TO			
FO-1			

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 2 of 19)



FO: FO TITLE: CORE ACTIVATION GND/PES/CRW **CENTRALIZED SS** DISTRIBUTED SS **FURNACE FUNCTION FUNCTIONS FUNCTIONS** MODULE MAL TBD TCS IN CORE OK? CRW YES STEP 5 **TEST CPC** CCU CPC NO MAL TBD OK? CRW YES STEP 6 **GDS TEST** IN CORE GDS IN NO MAL TBD CORE OK? CRW

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 3 of 19)

FO TITLE: FO: CORE ACTIVATION **FURNACE DISTRIBUTED SS** GND/PES/CRW **CENTRALIZED SS** MODULE FUNCTION **FUNCTIONS FUNCTIONS** B STEP7 **ACTIVATE CAMERA TEST HIGH-RATE** LINK CCU HR NO MAL TBD LINK OK? CRW YES STEP 8 **CORE READINESS** CHECK CCU CORE NO MAL TBD READY? CRW YES END OF FO-1 PROCEED TO FO-2

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 4 of 19)

FO: FO TITLE: DISTRIBUTED EQUIPMENT ACTIVATION **FURNACE** CENTRALIZED SS DISTRIBUTED SS GND/PES/CRW MODULE **FUNCTIONS FUNCTION FUNCTIONS** STEP 1 ACTIVATE RPCM CCU STEP 2 **ACTIVATE** FCU ON FCU CCU STEP 3 FCU CHECKOUT CCU FÇU NO. MAL TBD OK? CRW YES STEP 4 ACTIVATE **FAU ON** FAU CCU STEP 5 CHECKOUT FAU FCU FAU NO MAL TBD OK? CRW YES

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 5 of 19)

DISTRIBUTED EQUIPMENT ACTIVATION FO TITLE: FO: **FURNACE** DISTRIBUTED SS CENTRALIZED SS GND/PES/CRW MODULE **FUNCTIONS FUNCTIONS FUNCTION** В STEP 6 **CONFIGURE AND VERIFY TCS IN** FURNACE FCU NO TCS MAL TBD OK? CRW YES STEP 7 CHECKOUT OF GDS COMPONENTS FCU NO GDS MAL TBD OK? CRW YES STEP 8 **ACTIVATE FURNACE FURNACE** SPECIFIC TESTS SPECIFIC TESTS FCU NO **FURNACE** MAL TBD OK? CRW YES END OF FO-2 PROCEED TO FO-3

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 6 of 19)

FO TITLE: FO: **FURNACE SAMPLE EXCHANGE AND VERIFICATION** GND/PES/CRW **DISTRIBUTED SS FURNACE CENTRALIZED SS FUNCTIONS** MODULE **FUNCTION FUNCTIONS** STEP 1 STEP 2 COMMAND INITIATE VENT/FILL MANUAL **VENT/FILL FURNACE** EXCHANGE CCU CRW STEP 3 **CLOSE VALVES/ EQUALIZE FURNACE PRESSURE** CRW STEP 4 PREP **EQUIPMENT** CRW STEP 5 **OPEN SIP** CRW STEP 6 **INSERT SAMPLES** CRW STEP 7 **CLOSE SIP** CRW

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 7 of 19)

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 8 of 19)

FO: 3 FO TITLE: FURNACE SAMPLE EXCHANGE AND VERIFICATION  OSCIETA LIZER SS DISTRIBUTED SS FURNACE							
GND/PES/CRW	CENTRALIZED SS	DISTRIBUTED SS FUNCTIONS	MODULE				
STEP 8 OPEN MANUAL VALVES CRW  STEP 9 COMMAND MANUAL EXCHANGE OFF CRW  STEP 10 PERFORM SEAL CHECK CRW  STEP 11 LOAD LIST PROCESS PES  END OF FO-3 PROCEED TO FO-4	FUNCTIONS	FUNCTIONS	MODULE				

FO TITLE: FO: **FURNACE VENT/PURGE FURNACE CENTRALIZED SS DISTRIBUTED SS** GND/PES/CRW **FUNCTIONS** MODULE **FUNCTION FUNCTIONS** STEP 1 **ACTIVA TE** GN₂PURGE GDS GN2 PURGE CCU STEP 2 ARGON **GDS ARGON BACKFILL BACKFILL** CCU STEP 3 STEP 4 CONFIGURE COMMAND TCS SAMPLE PROCESS CCU GND GO SSFF TIMELINE CHECK CCU NO GO CONFIGURE **CORE FOR** STANDBY END OF FO-4 CCU PROCEED TO SAMPLE **PROCESS** 

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 9 of 19)

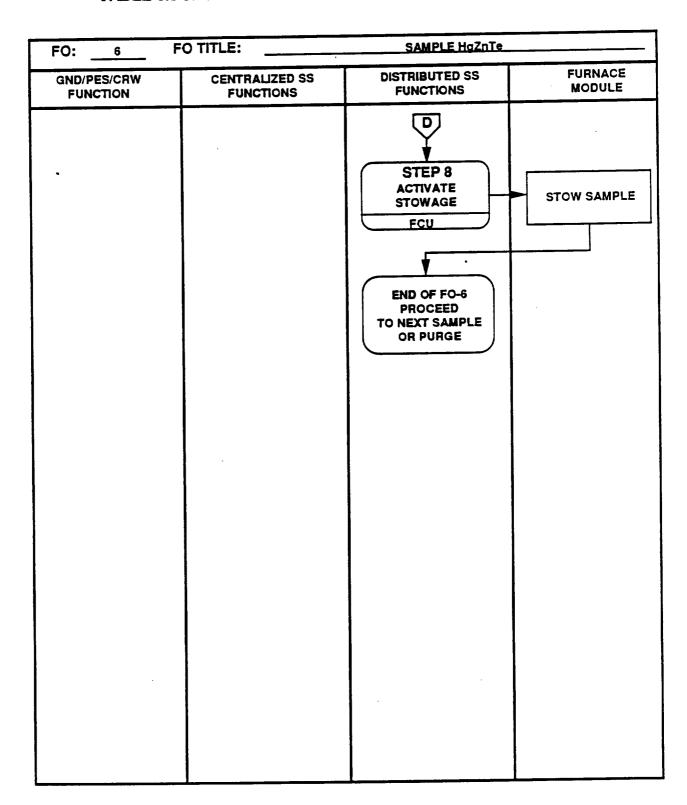
SAMPLE HaCdTe FO TITLE: FO: **FURNACE** DISTRIBUTED SS CENTRALIZED SS GND/PES/CRW MODULE **FUNCTIONS FUNCTIONS FUNCTION** STEP 2 STEP 1 ACTIVATE **PROCESS** COMMAND HEAT CYCLE HEAT CYCLE FURNACE PROCESS FCU GND/PES STEP 3 ACTIVATE ANNEAL SAMPLE SAMPLE **ANNEALING** FCU STEP 4 INITIATE **PROCESS** VAPOR CRYSTAL VAPOR CG GROWTH FÇU STEP 5 COOL DOWN INITIATE AND EXTRACT COOLDOWN SAMPLE FCU STEP 6 STOW SAMPLE **ACTIVATE** STOWAGE FCU END OF FO-5 PROCEED TO NEXT SAMPLE OR PURGE

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 10 of 19)

FO: FO TITLE: SAMPLE HaZnTe GND/PES/CRW **CENTRALIZED SS** DISTRIBUTED SS **FURNACE FUNCTION FUNCTIONS FUNCTIONS** MODULE STEP 2 STEP 1 **ACTIVATE PROCESS** COMMAND **HEAT CYCLE HEAT CYCLE FURNACE PROCESS** GND/PES FCU STEP 3 **ACTIVATE** SOAK INITIAL SOAK FCU STEP 4 TRANSLATE **ACTIVATE** TO GROWTH **TRANSLATION** POSITION FCU STEP 5 **ACTIVATE** SOAK **FINAL SOAK** FCU STEP 6 INITIATE PROCESS **DIRECTIONAL** (DIRECTIONAL SOLIDIFICATION SOLIDIFICATION) FCU STEP 7 INITIATE **COOL SAMPLE** COOLDOWN FCU D

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 11 of 19)

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 12 of 19)



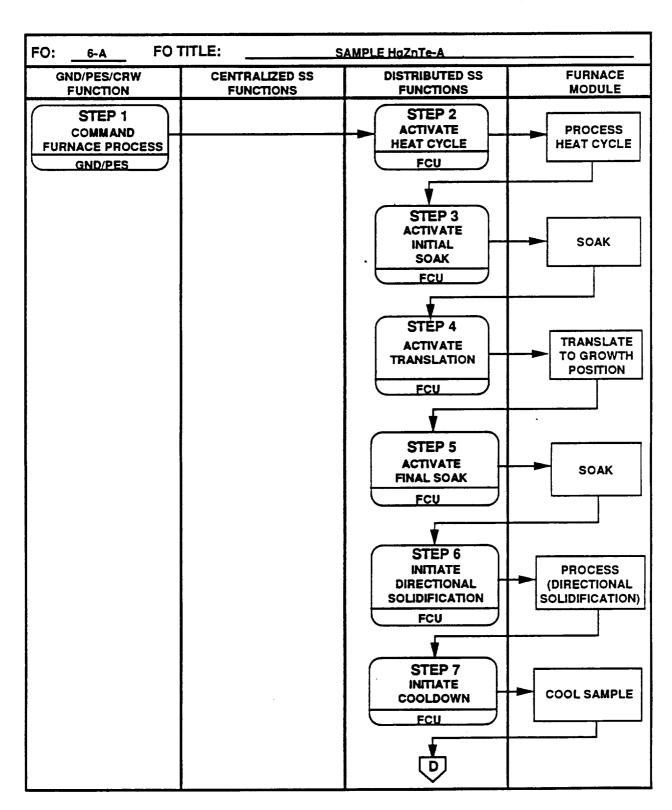


TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 13 of 19)

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 14 of 19)

FO: <u>6-A</u>	FO TITLE:	SAMPLE HoZnTe-A	
GND/PES/CRW FUNCTION	CENTRALIZED SS FUNCTIONS	DISTRIBUTED SS FUNCTIONS	FURNACE MODULE
		STEP 8 ACTIVATE STOWAGE FCU  END OF FO-6A PROCEED TO NEXT SAMPLE OR PURGE	STOW SAMPLE

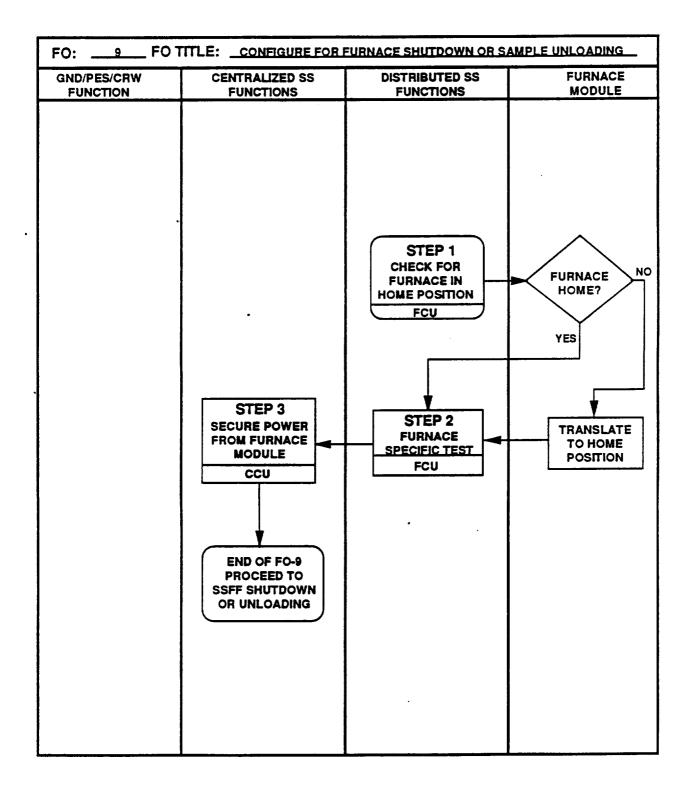
FO TITLE: FO: SAMPLE CdTe 7 **FURNACE** GND/PES/CRW **CENTRALIZED SS DISTRIBUTED SS** MODULE **FUNCTIONS FUNCTION FUNCTIONS** STEP 2 STEP 1 ACTIVATE **PROCESS** COMMAND HEAT CYCLE **HEAT CYCLE** FURNACE PROCESS FCU GND/PES STEP 3 INITIATE SOAK SOAK FCU STEP 4 INITIATE **PROCESS** DIRECTIONAL (DIRECTIONAL SOLIDIFICATION SOLIDIFICATION) FCU STEP 5 COOL INITIATE SAMPLE COOLDOWN FCŲ STEP 6 **ACTIVATE** STOW SAMPLE STOWAGE FCU **END OF FO-7** PROCEED TO NEXT SAMPLE OR PURGE

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 15 of 19)

SAMPLE GaAs FO TITLE: FO: FURNACE DISTRIBUTED SS CENTRALIZED SS GND/PES/CRW MODULE **FUNCTIONS FUNCTIONS FUNCTION** STEP 2 STEP 1 **PROCESS ACTIVATE** PREHEAT COMMAND PREHEAT CYCLE CYCLE **FURNACE PROCESS** FCU **GND/PES** STEP 3 ACTIVATE **PROCESS HEAT CYCLE** HEAT CYCLE FCU STEP 4 INITIATE SOAK SOAK FCU STEP 5 TRANSLATE ACTIVATE FURNACE/ TRANSLATION **PROCESS PROCESS** SAMPLE FCU STEP 6 COOL INITIATE SAMPLE COOLDOWN FCŲ STEP 7 ACTIVATE STOW STOWAGE SAMPLE FCU **END OF FO-8** PROCEED TO NEXT SAMPLE OR PURGE

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 16 of 19)

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 17 of 19)



COMPLETE SSFF SHUTDOWN FO TITLE: FO: 10 **FURNACE** DISTRIBUTED SS CENTRALIZED SS GND/PES/CRW MODULE **FUNCTIONS FUNCTIONS FUNCTION** STEP 1 **ACTIVATE SSFF** DISTRIBUTED EQ SHUTDOWN SHUTDOWN ÇCU GND STEP 2 VERIFY . **EXPERIMENT** AND FURNACE SHUTDOWN CCU STEP 3 GDS SHUTDOWN CCU STEP 4 DMS NONESSENTIAL SHUTDOWN CCU STEP 5 TCS SHUTDOWN CCU STEP 6 **CCU SHUTDOWN** CCU **END OF FO-10** 

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 18 of 19)

FO: FO TITLE: 11 FURNACE CALIBRATION/BAKEOUT GND/PES/CRW **CENTRALIZED SS** DISTRIBUTED SS **FURNACE FUNCTION FUNCTIONS FUNCTIONS** MODULE STEP 1 STEP 2 **ACTIVATE** INITIATE CALIBRATION **PROCESS CALIBRATION** CALIBRATION **BAKEOUT GND/PES** FCU STEP 3 **ACTIVATE PROCESS BAKEOUT BAKEOUT** FCU **END OF FO-11** PROCEED TO **NEXT SAMPLE** OR PURGE

TABLE 1.1-3. SSFF OPERATIONAL FUNCTIONAL FLOW (Sheet 19 of 19)

# 1.2. STRUCTURAL/MECHANICAL

The Integrated Configuration-1 (IC1) Space Station Furnace Facility (SSFF) will be mounted in the U. S. Laboratory (USL) Module-A. The SSFF Core Rack will be mounted in a double rack location, and Experiment Rack-1 will be mounted in an adjacent double rack location. Figure 1.2-1 shows the SSFF system interface with Space Station Freedom (SSF). The physical and functional interfaces defined herein between SSFF and the USL are as follows:

- SSF-to-SSFF Mechanical Structures Subsystem (MSS) Physical Interfaces:
  - SSFF Core Rack to USL Module-A
  - SSFF Experiment Rack-1 to USL Module-A
  - SSFF Interconnect Tray Assembly to USL Module-A
- SSF-to-SSFF Core Rack Services Functional Interfaces:
  - SSF Electrical Power System (EPS) to SSFF Core Rack
  - SSF Data Management Subsystem (DMS) to SSFF Core Rack
  - SSF Thermal Control Subsystem (TCS) to SSFF Core Rack
  - SSF Vacuum Exhaust System (VES) to SSFF Core Rack
     SSF Liquid Nitrogen System (LNS) to SSFF Core Rack
  - SSF avionics air to SSFF Core Rack
  - SSF fire detection and suppression to SSFF Core Rack
- SSF-to-SSFF Experiment Rack-1 Services Functional Interfaces:
  - SSF avionics air to SSFF Experiment Rack-1
  - SSF fire detection and suppression to SSFF Experiment Rack-1
- · Crew Interface

## 1.2.1 EOUIPMENT LIST AND MASS PROPERTIES

Mass properties of the SSFF are shown in Table 1.2-1. Stowage items and their properties are shown in Table 1.2-2.

### 1.2.2 INTERFACE DETAIL

#### 1.2.2.1 SSF-to-SSFF MSS Interface

The SSFF MSS will interface with SSF by physical connections of the Core Rack, Experiment Rack-1, and the MSS Interconnect Tray Assembly. The Core Rack and Experiment Rack-1 are rack replacement structures modified from an International Standard Payload Rack (ISPR), and they attach to the USL at the ISPR pivot points and attach fitting locations. Figure 1.2-2 shows the Core Rack interface with SSF, and Figure 1.2-3 shows the Experiment Rack-1 interface with SSF. Figure 1.2-4 shows the Interconnect Tray Assembly, which provides support for the cabling and plumbing between the Core Rack and Experiment Rack-1. The Interconnect Tray Assembly attaches to the USL in the standoff.

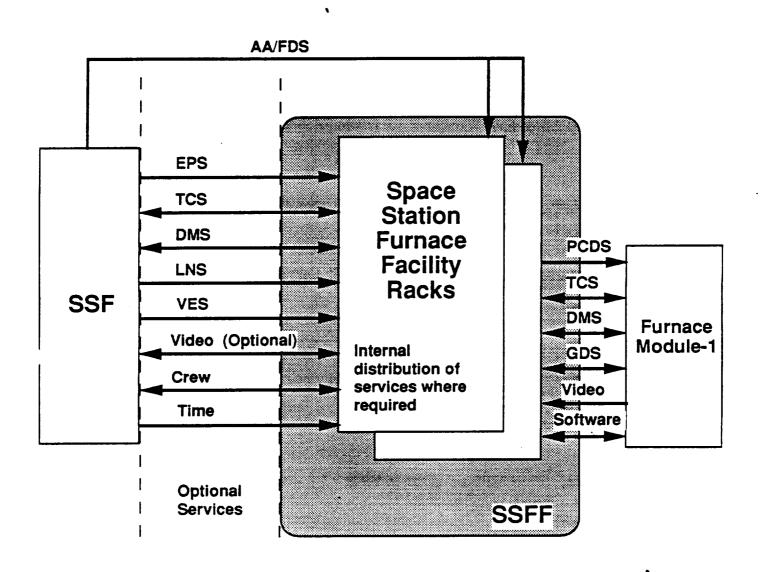


FIGURE 1.2-1. SSFF TO SSF RESOURCE INTERFACES

TABLE 1.2-1. LIST OF EQUIPMENT PROPERTIES (Sheet 1 of 5)

Equipment Nomenclature	Mass (kg)	Mas	Mass Maturity (%)	$\vdash$	Mounting Preferred	Center of Station	enter of Gray Station (cm)	Gravity (cm)	Mon	Moment of Ir (kg-m2)	Inertia	Produ (k	Product of Inertia (kg-m2)	rtial
	/8	est.	cal.	act.		X	Y	Z	×	ly	ZI	Ixy	Ixz	Iyz
GAS DISTRIBUTION SUBSYSTEM:														
Centralized Equipment:	ţ	5	<	-	9	Ton	J. C.	TBD	Tan	T. C.	TAD	TRU	TRD	TRU
Argon+bottle (1)	C.7.	3	0 (	> <				TED		Tan	TEL		T CE	TEL
Latching Sol. Valves (4)	0.4	3	> 0	> <			T C C		TAP		TAN C		TED	TRD
anual Valves, 1/4" (4)	0.9	3.5	<b>-</b>	<b>-</b>		100		Tan		Tab Car	TAP			T. C.
Manual Valve, 1" (1)	2.4	38	<b>-</b>	> <					Tan T		TAD			T C
Regulators (2)	 	3 5	)	> <			Tar.		TAN C	TED CE	TEL CENT	THE CHIEF	TED CE	TBD
Filter, 1/4" (2)	0.5	38	0	> <		TRD	THE CHIEF	TEN CERT	TRD		TBD	180	TBD	TBD
Pressure Sensors (3) Pressure Gauge (1)	0.5	38	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Contamin Monitor (1)	18.0	8	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
heck Valve, 1/4" (4)	9.0	9	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	130	TBD	180
D (with cap), 1/4" (4)	0.4	18	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	GEL	TRO	CHI.
QD (with cap), 1" (2)	3.2	<u>8</u>	0	0	TBD	TBD	TBD	TBD	TBD	TRD	TBD	JED C	T EU	
Plumbing/hose/fittings	0.9	8	0	0	TBD	CRI	TRD	TRD	180	180	Ual I	TRD	Jai	
Distributed Equipment:	,		(	(		(		(	A CL	Ę	Con	T.O.T.	Car	Tan
Latch. Sol Valve (6)	0.9	92	0	۰ د	TBD	TRD		180		לפו קנוני			1 E	
Press. Relief Valves (2)	0.0	9	<u> </u>	<u> </u>	TBD	IBD		TED COLLEGE	JBU			Jar		
Filter, 1" (1)	3.6	<u>8</u>	<b>-</b>	0	TRD	TRD				ו מנה המה		Ton		
Compressor (1)	15.0	8	<b>O</b>	<u>۔</u>	TRD	IBD	_	180 C	Jan	מן מונ				
Storage Tank (1)	17.5	<u>8</u>	<b>-</b>	<u>۰</u>	TRD	ORI.		IBD	IBD Tab	T T T		Jar Caf		Tan
Accumulator (1)	0. 8. -	8	<b>-</b>	<b>-</b>	CIRI CIRI	IBU								Tar
Check Valves (2)	0.4	3	<b>-</b>	<u> </u>	URI	IBD		TED C	TIBL			701		
CM Sensor (2)	0.9	8	0	0	TBD	1.80		1BD	TRD	USI Carrie	I BD			
Pressure Sensors (3)	0.5	<u>8</u>	0	0	TBD	TBD	-	CRI	IBD	OSI Contraction		Jan		
D (with cap), 1/4" (1)	0.1	8	0	0	TBD		_	CRI		TISD	180	185	Jar Jar	
OD (with cap), 1" (1)	1.6	8	0	0	TBD	TBD	_		TBD	CRI	CRI	IBD	OH I	
Check Valve, 1/4" (1)	0.1	18	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	IBD	ORI.	
Plumbing/hose/fittings	1.0	8	0	0	TBD	TBD			CIRI.	CRI.	<u> </u>	TRD	Og I	<u> </u>

TABLE 1.2-1. LIST OF EQUIPMENT PROPERTIES (Sheet 2 of 5)

rtial	Iyz			TBD	180	TE OFFI	TBD			
Product of Inertial (kg-m2)	lxz		OBT OBT	JET OFFI	DET CET	TED	TBD			
Produ (k	Ixy		OST CEL	TBD		TED	TBD	08E 08E 08E		
nertia	ZĮ			TBD	OBT OBT CBT	TBD	TBD	OBT OBT OBT		
Moment of Inertia (kg-m2)	ly		18D 18D	TBD	TBD CBT CBT	TBD	TBD			081
Mon (	×I		TBD	TBD	OBT OBT	TBD	TBD	CET CET CET		
avity n)	Z		TBD	TBD	TBD CEL	TBD CBT	TBD			
Center of Gravity Station (cm)	Y		180	TBD	TBD CEL	TBD	TBD	OBT OBT OBT		
Cente Sta	×		180	TBD	TBD	TBD	TBD	180 180 180		185 185 185 185
Mounting Preferred			180 081 081	Jan Dan Dan Dan Dan Dan Dan Dan Dan Dan D	OBT COET	TBD	TBD	TBD TBD TBD		18D 18D 08T 08T
l .	act.		000	0	000	0	0	000		0000
Mass Maturity (%)	cal.		000	0	000	0	0	000		0000
Ma	est.		. 888	100	888	38	92	888		8888
Mass (kg)			29.0 22.0	57.0	20.0	20.0	43.5	29.0 20.0 6.5		42.0 47.2 4.5 4.5
Equipment Nomenclature		DATA MANAGE- MENT SUBSYSTEM	Centralized Equipment: Core Control Unit (1) Hard Drive (1)	High-Density Recorder (1)	Core Monitor & Control Unit (1) Crew Interface (1)	Cabling (AR)	Distributed Equipment: Furnace Control Unit (1)	Furnace Actualor Unit (1) DCMU (1) Cabling (AR)	POWER CONDITION- ING AND DISTRIB. SUBSYSTEM	Centralized Equipment: Core Power Distrib. (1) Core Pwr Conditioner (1) Core Junction Box-A (1)

TABLE 1.2-1. LIST OF EQUIPMENT PROPERTIES (Sheet 3 of 5)

ial	Iyz		380		
Product of Inertial (kg-m2)	$\vdash$				
Produc (kg	Ixy	-	OBT OBT	180 180 180 180 180	
ertia	ZI		CEL CEL CEL	78D 78D 78D 78D 78D 78D	
Moment of Inertia (kg-m2)	ly		08T 08T 08T	180 180 180 180 180	
Mom (k	Ι×		OSE OSE OSE	78D 78D 78D 78D 78D 78D	08T 08T 08T 08T 08T 08T 08T
(vity	Z		130 130 130	130 130 130 130 130 130	78D 78D 78D 78D 78D 78D 78D 78D
Center of Gravity Station (cm)	Y		180 180 180	18D 18D 18D 18D 18D	780 780 780 780 780 780 780
Center Stat	×		180	180 180 180 180 180	78D 78D 78D 78D 78D 78D 78D 78D
Mounting Preferred			18D 18D 18D	180 180 180 180 180 180	18D 18D 18D 18D 18D 18D
1	act.		000	00000	0000000
Mass Maturity (%)	cal.		000	00000	0000000
Mas	est.		888	888888	99999999
Mass (kg)	à		3.2 2.0 11.3	13.6 7.3 9.5 4.8 33.0	13.6 15.9 1.5 3.7 0.5 24.0 3.3
Equipment Nomenclature		POWER CONDITION- ING AND DISTRIB. SUBSYSTEM (Cont.)	Centralized Equip. (cont.) Essentials Pwr Supp. (1) Volt./Current Sensors (4) Line and Connectors	Distributed Equipment: Current Pulsing Equipment (1) Furnace Pwr. Dist. (1) Furnace Junction Box (1) Essentials Pwr Supp. (1) Volt./Current Sens. (66) Line and Connectors	THERMAL CONTROL SUBSYSTEM Centralized Equipment: Heat Exchanger (1) Pump Package (1) Flow Meters (2) Flow Control Valves (2) Temperature Sensors (5) Pressure Transducers (3) Custom Coldplates (4) -5 Coldplates (2)

TABLE 2-1. List of Equipment Properties (Sheet 4 of 5)

Equipment	Mass	Mas	Mass Maturity	Tity	Mounting	Sent	Center of Gi	Gravity	Mon	Moment of In	Inertia	Prod	Product of Inertial	rtial
Nomenclature	(kg)		(%)	•	Preferred		Station (cm	m)	ت	(kg-m2)		3	(kg-m2)	
		est.	cal.	act.		×	>	Z	×	Iy	ZĮ	Ixy	Ixz	lyz
THERMAL CONTROL SUBSYSTEM														
Centralized Equip. (Cont.):	(	(	,	(										!
Pwr Mod CP-Upper (2)	12.0	8	0	0	TBD	13D	TBD	TBD	TBD	TBD	TBD	TBD	130	TBD
Pwr Mod CP-Lower (2)	8.6	8	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	130	TBD	TBD
Plumbing (25 m)	13.6	18	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Quick Disconnects (37)	3.7	9	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Check Valves (2)	0.1	92	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Manual Valves (2)	0.3	100	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Shutoff Valves (2)	3.7	92	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Water	10.0	100	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Distributed Equipment:	117	ξ	_	<	001	TOT	TOL	JOL	T OF	Joh	Ę	Car	É	2
Transfer of Crs (2)	7:1	3 8	> <	> <	Jar Car			) (L						
remperature sensors (3)	7.0	3 5	> 0	> 0	IBD	100		160	150	TBD	Jan G	Jan Car	185	185
Pressure Transducer (1)	0.5	3	) )	<u> </u>	CRI	CRI	CIRI.	GRI	CSI	OBI.	GRI	IBD	TBD	CEI.
Flow Meter (1)	0.8	8	0	0	TBD	TBD	TBD	130	TBD	130	TBD	180	180	TBD
Flow Control Valve (1)	1.9	188	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Check Valve (1)	0.1	8	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Manual Valve (1)	0.7	188	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Shutoff Valve (1)	1.9	100	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Plumbing (12 m)	8.9	100	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Quick Disconnects (16)	1.6	188	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Water	7.0	100	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

TABLE 1.2-1. LIST OF EQUIPMENT PROPERTIES (Sheet 5 of 5)

TABLE 1.2-2. STOWAGE LIST

Special Requirements			
e ge	K		
Stowage Phase	0 7		•
$\vdash$	-		
wage onsiblity	PL	•	
Stowage Responsiblity			
Dimensions (cm) LxWxH or LxDia			
Mass Each	(gy)		
Number Required			
Item		TBD	

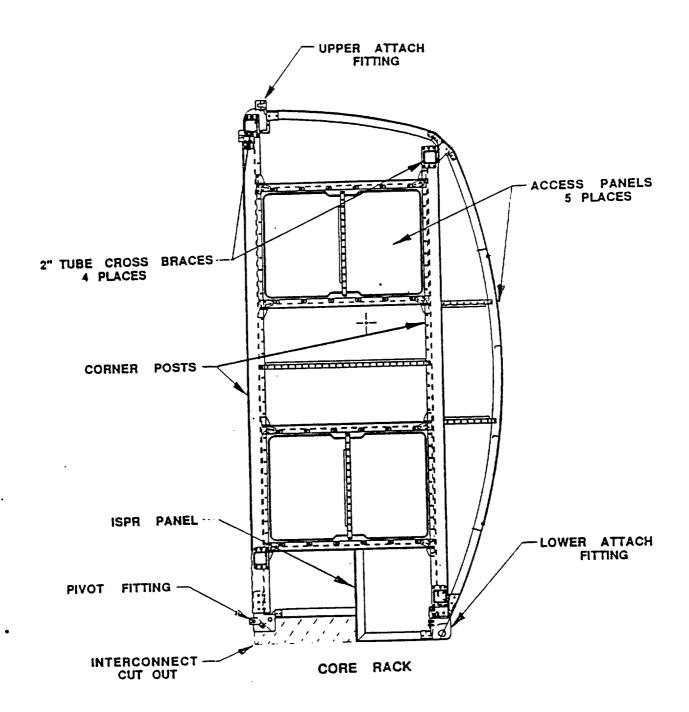


FIGURE 1.2-2. SSF TO SSFF CORE RACK PHYSICAL INTERFACE

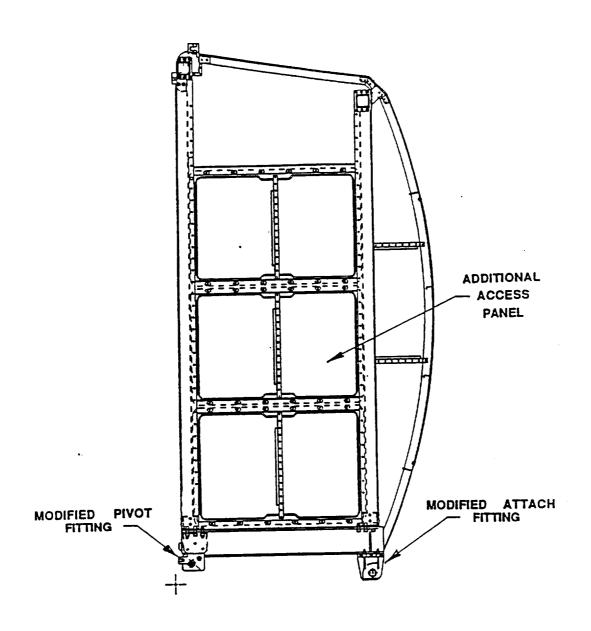


FIGURE 1.2-3. SSF TO SSFF EXPERIMENT RACK-1 PHYSICAL INTERFACE

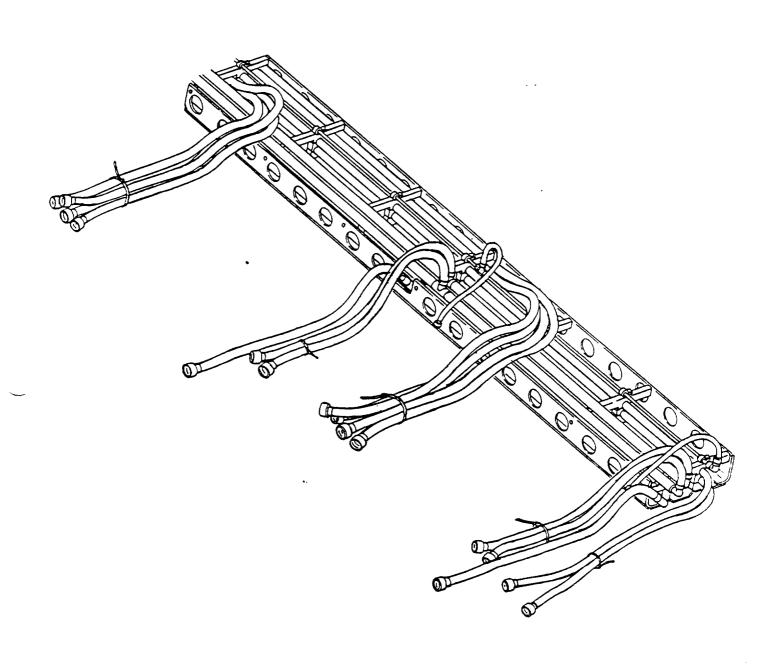


FIGURE 1.2-4. SSFF INTERCONNECT TRAY ASSEMBLY

#### 1.2.2.2 SSF-to-SSFF Core Rack Interface

The SSFF will interface with SSF services in the standoff through an ISPR passthrough rack panel in the Core Rack. Figure 1.2-5 shows this Core Rack panel layout. SSFF subsystems receive the SSF services at the Core Rack, and then those services are routed out to Experiment Rack-1. All SSF services are provided at the Core Rack except avionics air and fire detection and suppression, which are provided at each rack location. Subsystem interfaces with SSF are described below.

- 1.2.2.2.1 <u>SSF EPS-to-SSFF Core Rack</u> The SSFF Power Conditioning and Distribution Subsystem (PCDS) will interface with the SSF EPS by connecting to two 6-kW, 120-Vdc power buses in the Core Rack.
- 1.2.2.2.2 <u>SSF DMS-to-SSFF Core Rack</u> The SSFF DMS will interface with the SSF DMS by connecting to the MIL-STD-1553 bus or the payload fiber distributed data interface (FDDI) at the Core Rack panel. The SSFF DMS will also require a high-rate data link (HRDL) interface at the Core Rack panel to accommodate transfer of high-rate data.
- 1.2.2.2.3 <u>SSF TCS-to-SSFF Core Rack</u> The SSFF TCS will interface with the SSF TCS by connecting to the moderate temperature cooling loop with hoses from a payload rack heat exchanger behind the Core Rack panel.
- 1.2.2.2.4 SSF VES-to-SSFF Core Rack The SSFF Gas Distribution Subsystem (GDS) will interface with the SSF VES by connecting a vacuum line at the Core Rack panel.
- 1.2.2.2.5 <u>SSF LNS-to-SSFF Core Rack</u> The SSFF GDS will interface with the SSF LNS by connecting a nitrogen line at the Core Rack panel.

## 1.2.2.3 SSF-to-SSFF Experiment Rack-1 Interface

The only services provided directly from SSF to Experiment Rack-1 are avionics air and fire detection and suppression. The SSF will interface with SSFF Experiment Rack-1 at the furnace interface panel as shown in Figure 1.2-6. An SSFF-provided hose assembly will connect between this panel and the standoff interface service connection. All other Experiment Rack-1 services will be provided by the SSFF Core Rack.

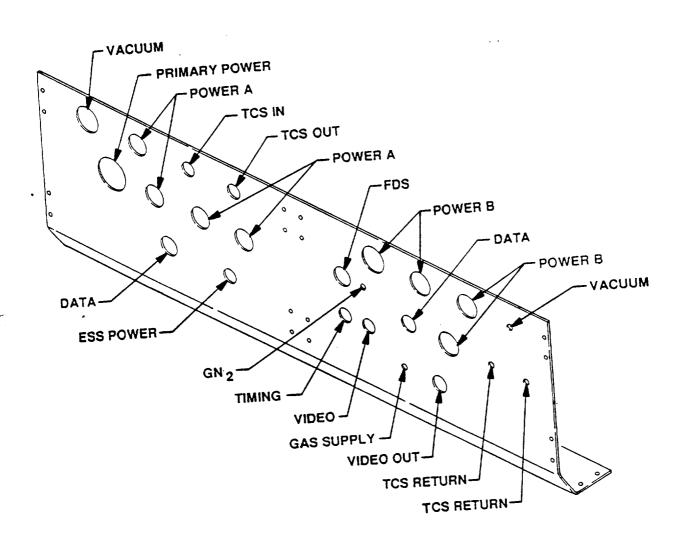


FIGURE 1.2-5. CORE RACK PANEL LAYOUT

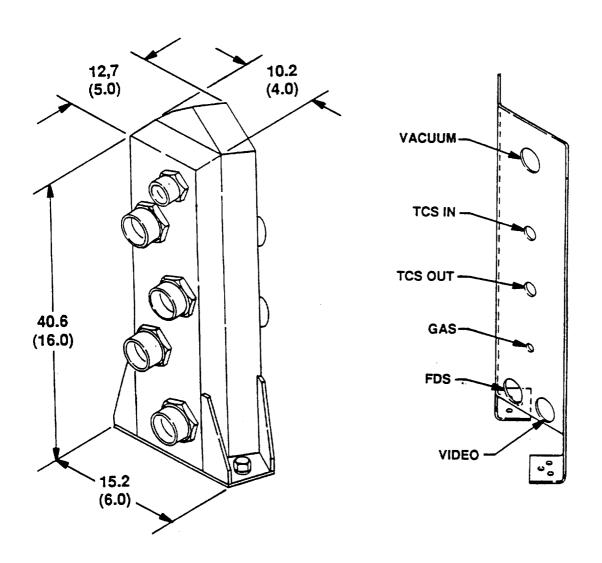


FIGURE 1.2-6. EXPERIMENT RACK-1 PANEL LAYOUTS

# 1.2.2.4 Crew Interface

A keyboard and display interface will be provided for crew interaction at the Core Rack. This system will have a standard QWERTY-type keyboard which can accept crew input commands for operation or configuration of the SSFF subsystems as required. Experiment sample exchanges will also require crew interface at Furnace Module-1, and opening and closing of manual valves will require crew interface at both rack locations.

# 1.3. POINTING/STABILIZATION AND ALIGNMENT

The Space Station Furnace Facility (SSFF) is required to provide for the alignment of the axis of selected solidification modules to within 5° of the residual g-vector. An acceleration of approximately 1.8 by 10-6 go is required to prevent a 100-µm particle from moving 1 diameter in 1000 sec.

The allowable acceleration level requirements are as follows for a 1-cm diameter sample:

1.	$g \le 1.0 \times 10^{-6} g_0$	for $0 \le f \le 0.020$ for periods up to 90 days
2.	$g \le 1.0 \times 10^{-6} g_0 \times \frac{f}{0.020 \text{ Hz}}$	for $f \ge 0.020$ along residual g-vector
3.	$g' \le 1.6 \times 10^{-7} g_0 \times \frac{f}{0.020 \text{ Hz}}$	for $f \ge 0.012$ along any axis perpendicular to the residual g-vector

where,

Acceleration level within the experimental sample fluid (melt, solution, or vapor) g and at the solidification/fluid interface.

Acceleration at sea level on Earth. go

Acceleration level perpendicular to direction of solidification front or desired fluid g'

Frequency of periodic accelerations in hertz. f

Furnace Module-1 requires that there shall be 1-mm maximum lateral displacement between sample and furnace centerlines at any point along centerlines at any time during processing. This does not include any contribution from the sample's being not straight or out of round. It does include heater assembly and translation system contributions.

			<u> </u>
	•		
		•	
			)

# 1.4. ORBITAL REQUIREMENTS AND CONSTRAINTS

TBD

		•		
				$\overline{}$
	•			
		•		
	•			
	,			
			•	
				$\mathcal{L}$

# 1.5. ELECTRICAL REQUIREMENTS

The Space Station Furnace Facility (SSFF) Power Conditioning and Distribution Subsystem (PCDS) is composed of the equipment necessary to condition and distribute power provided by the Space Station Freedom (SSF) Electrical Power System (EPS) to SSFF subsystems. Figure 1.5-1 shows the PCDS block diagram. The SSFF PCDS will interface with the SSF by connecting to two 6-kW, 120-Vdc power buses. Since 3- and 6-kW SSF payload racks use one bus as a primary feed and the other as an essential feed, 12-kW racks are required to maintain  $1 \text{ M}\Omega$  of electrical isolation between the two buses at all times (SSF Electric Power Specifications and Standards, SSP 30482). No true essentials bus exists at this time, only the two main buses. This means that a 12-kW rack must tie the two buses together whenever backup essentials power will be required. The two SSFF power buses (Bus A and Bus B) will feed the PCDS via SSF-provided Remote Power Distribution Assemblies (RPDAs) or through an SSFF-designed assembly (similar in function).

The bulk of the power to be distributed by the PCDS will be consumed by the Furnace Module-1 heaters with the remainder serving as housekeeping power to the SSFF subsystems. The Integrated Configuration-1 (IC1) configuration of the SSFF will require maximum peak power from the SSF of 4.6 kW. The operational power profile defining the use of the SSF-provided power by the SSFF during each functional objective (FO) is shown in Figure 1.5-2. The power profile data given here represent power requirement estimates to cover any of the the SSFF-accommodated Furnace Module-1 needs. The power levels defined in Figure 1.5-2 are considered maximums. Time duration for peak power requirements is 72 h. The average power required is 2.7 kW. The total energy requirement is 3800 kWh.

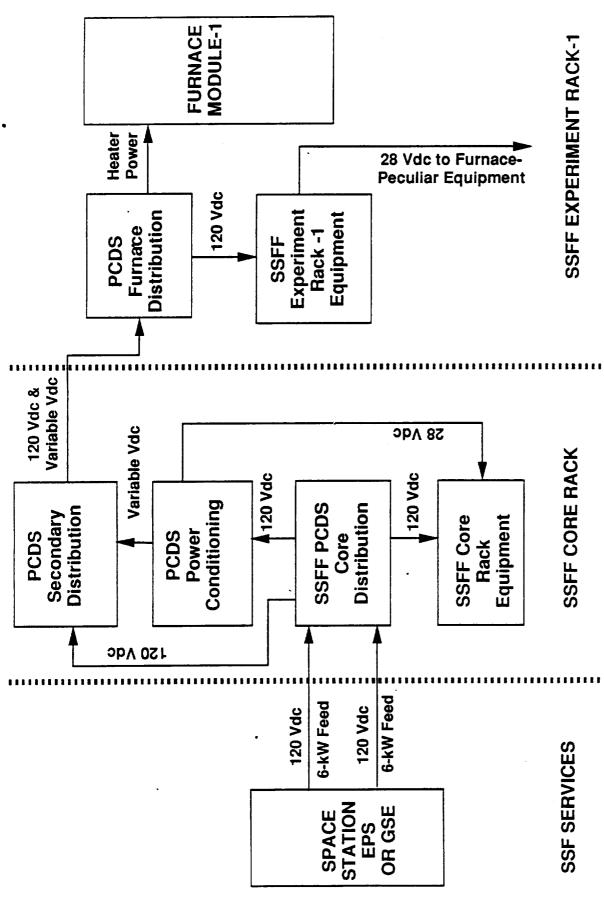
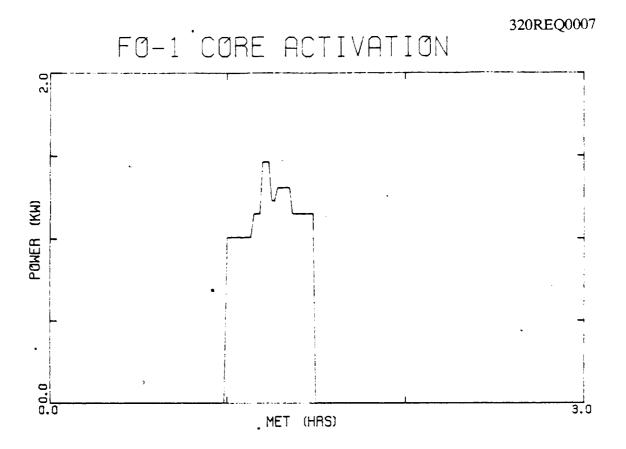


FIGURE 1.5-1. PCDS INTERFACE BLOCK DIAGRAM



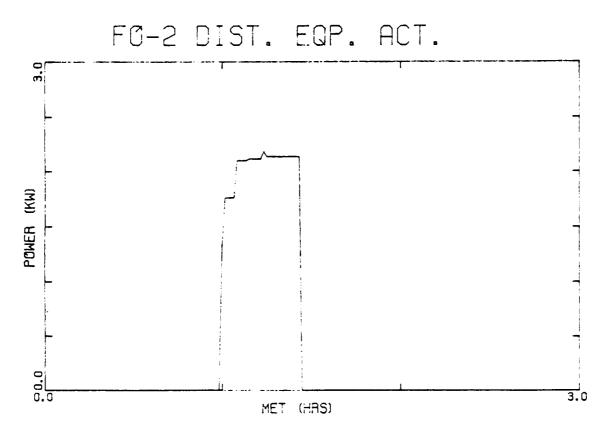
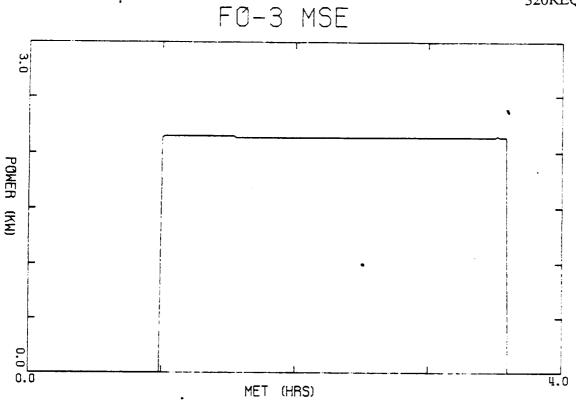


FIGURE 1.5-2. POWER PROFILES BY FUNCTIONAL OBJECTIVES (Sheet 1 of 6)





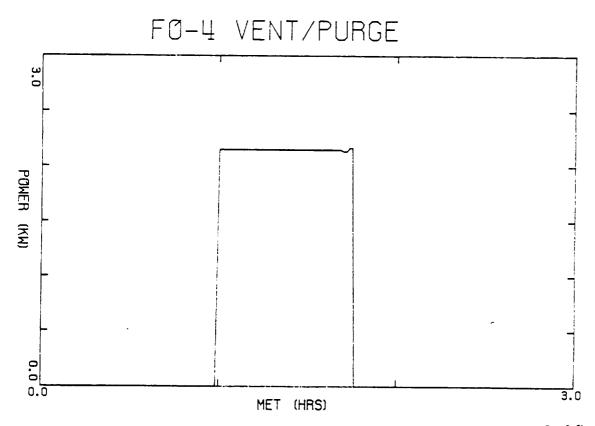
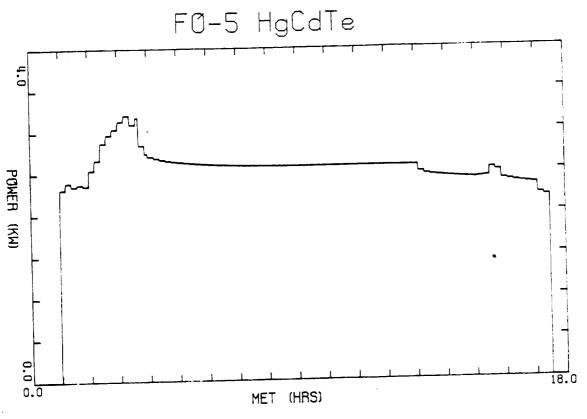


FIGURE 1.5-2. POWER PROFILES BY FUNCTIONAL OBJECTIVES (Sheet 2 of 6)





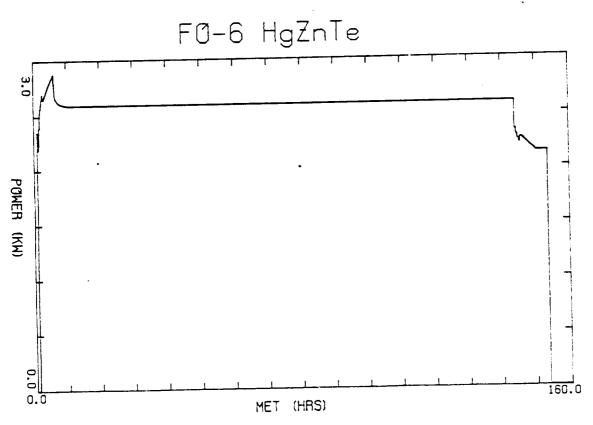
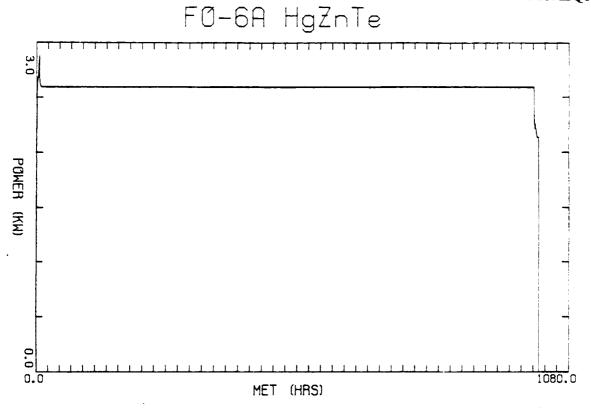


FIGURE 1.5-2. POWER PROFILES BY FUNCTIONAL OBJECTIVES (Sheet 3 of 6)



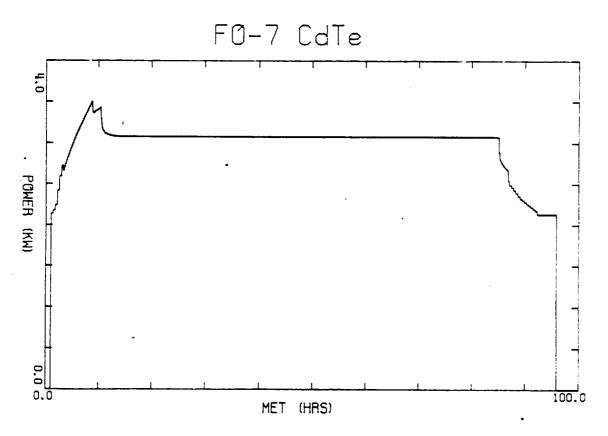
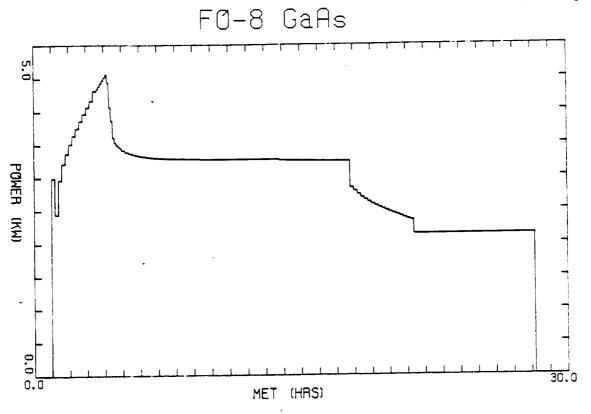


FIGURE 1.5-2. POWER PROFILES BY FUNCTIONAL OBJECTIVES (Sheet 4 of 6)



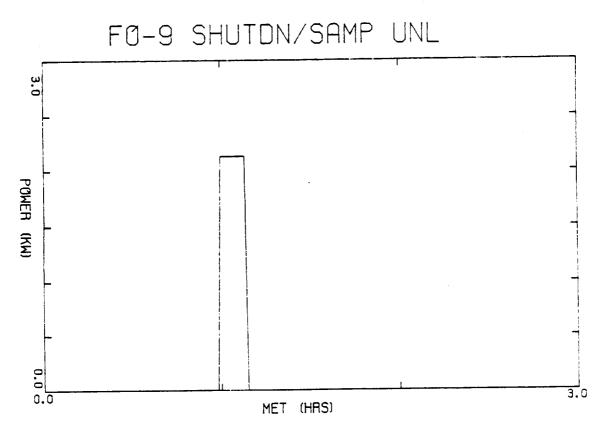


FIGURE 1.5-2. POWER PROFILES BY FUNCTIONAL OBJECTIVES (Sheet 5 of 6)

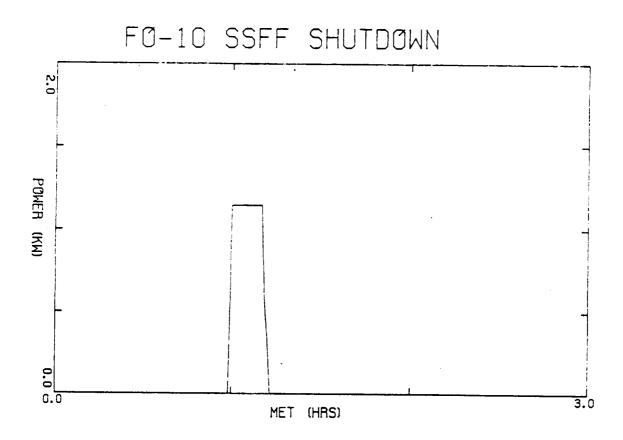


FIGURE 1.5-2. POWER PROFILES BY FUNCTIONAL OBJECTIVES (Sheet 6 of 6)

# 1.6. THERMAL/FLUID REQUIREMENTS

# 1.6.1 HEAT TRANSFER CHARACTERISTICS

The Space Station Furnace Facility (SSFF) Thermal Control System (TCS) water cooling loop will collect heat from Furnace Module-1 and the Core Rack electronics. The collected heat will then be transferred to the Space Station Freedom (SSF) TCS moderate temperature loop via the Core Rack heat exchanger. Figure 1.6-1 shows the TCS block diagram. On-orbit thermal requirements of the SSFF are shown in Table 1.6-1.

The SSFF TCS water cooling loop collects heat from the furnace modules and subsystem electronics. The collected heat is then transferred to the SSF TCS via the Core Rack heat exchanger. Total maximum heat dissipation of the Integrated Configuration-1 (IC1) configuration of SSFF to the SSF TCS is 4518 W.

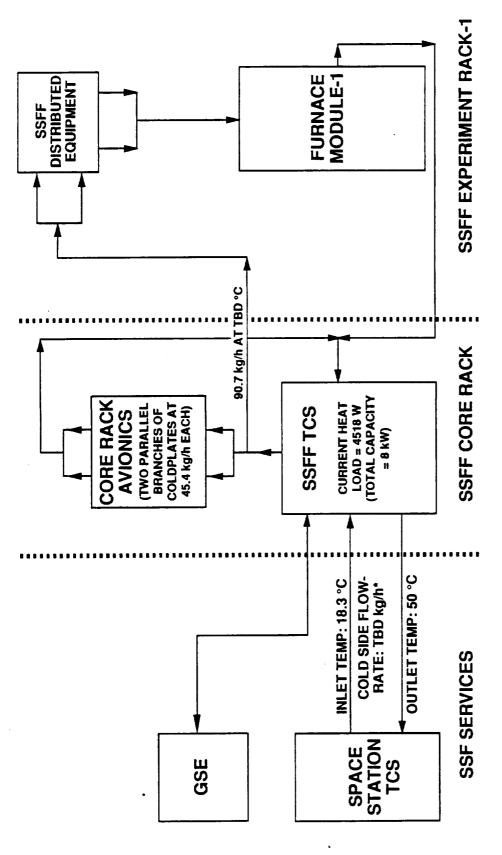
Avionics air will be required to cool some SSFF subsystem equipment in both racks. Total maximum heat dissipation to avionics air is 371 W in the Core Rack and 366 W in Experiment Rack-1.

# 1.6.2 FLUID/VENT REQUIREMENTS

The Gas Distribution Subsystem (GDS) provides the distribution of SSF-provided gases and vacuum to Furnace Module-1. It also provides contamination monitoring of waste gases and gaseous argon to Furnace Module-1. The GDS block diagram is shown in Figure 1.6-2.

The IC1 configuration of the SSFF GDS will require 10.4 kg of SSF-provided dry nitrogen at the Core Rack per 90-day mission, supplied at 618 to 756 kPa (90 to 110 psia). This will be regulated down internally in the core to approximately 137 to 240 kPa (20 to 35 psia) for safe pressurization of the furnace enclosures. The GDS will also require the SSF-provided vacuum at the Core Rack, which furnishes the furnace modules access to the 1 x 10-3 torr vacuum line.

Gas and vacuum requirements for the IC1 configuration of SSFF are shown in Table 1.6-2.



* ALLOCATED TO MATCH LOAD

FIGURE 1.6-1. TCS INTERFACE BLOCK DIAGRAM

TABLE 1.6-1. ON-ORBIT THERMAL REQUIREMENTS (Sheet 1 of 2)

Special	(as applicable)									
Thermal	Capacitance (W-h-°C)	TBD TBD	TBD	TBD	TBD TBD	TBD TBD TBD	78D 78D 78D	TBD CBT CBT	TBD CBT CBT	TBD TBD TBD
	Non- Operate									
Min/Max Temp (°C)	Operate (	17/43	17/43 18/50	17/43 18/50	17/43 18/50	17/43 18/50 TBD	17/43 18/50 TBD	17/43 18/50 TBD	17/43 18/50 TBD	17/43 18/50 TBD
Min/Ma	Standby Operate									
			391 1817	332 1817	347	317 1817 270	317 1817 285	317 1817 285	317 1817 580	317 1817 697
Cooling Load (W)	-	134	310	323 1817	332 1817	317 1817 232	317 1817 283	317 1817 283	317 1817 525	317 1817 524
Coolin		134 200 1053 1327								
	Exp.					×	×	×	×	×
aux.	Exp CP	(SSFF)	< ×	×	×	×	×	×	×	×
Hoat Sink Tyne	₫					•				
	Av. Air	Cabin (nonducted) (ducted)	×	×	×	×	×	×	×	×
		Cabin (1								
	Equipment Item and	FO No. FO-1	FO-1 FO-2 FO-2	FO-3 FO-3	F0-4 F0-4	FO-5 FO-5 FO-5	FO-6 FO-6	FO-6A FO-6A FO-6A	FO-7 FO-7	FO-8 FO-8 FO-8

TABLE 1.6-1. ON-ORBIT THERMAL REQUIREMENTS (Sheet 2 of 2)

Γ			T		
Crossial	Consideration	(as applicable)			
Thermal	Canacitance	(W-h-°C)	TBD	TBD	TBD
(),	Non	Operate			
Min/Max Temp (°C		Operate	17/43 18/50	17/43 18/50	17/43 18/50
Min/M		Standby			
S S	Peak*	or other	317 1817	121 1026	317 2016
W Load (W)		Operat	317 1817	44 465	317
Cooling		Standby			
	Exp.	Ĕ	×	×	×
s Type	Exp CP	(SSFF)			
Heat-Sink Type		コ			
	Av. Air Av. Air	Cabin (nonducted) (ducted	×	×	×
		Cabin			
Equipment	Item and	ا۔	FO-9 FO-9	FO-10 FO-10	FO-11 FO-11

Each FO contains multiple steps; therefore, peak water-cooled load and peak avionics air load may not occur on the same step.

FIGURE 1.6-2. GDS INTERFACE BLOCK DIAGRAM

	Functional		Gasor	Gas or Liquid Parameters	eters		Ä	Vent		
	Requirement									
Equipment	(Pressure,		Quantity	Pressure	Flow-	Pressure		When	Vacuum Vent	Special
Item and FO No.	Furge, Vent Vacuum)	Type	Stored (kg)	(N/m ² )	rate (kg/h)	Drop (N/m2)	Pressure (Pa)	Required and Duration	Rate: torr-l/sec	Considerations (as applicable)
FO-1	N/A									
FO-2	N/A									
FO-3	Purge/vent	GN ₂	1.4 (supp. by SSF)	TBD	TBD	TBD	0.133	TBD	$1.2 \times 10^{-3}$	
F0-4	N ₂ purge/vent	GN ₂	1.4	TBD	TBD	TBD	0.133	TBD	$1.2 \times 10^{-3}$	
FO-4	Ar purge/vent	Ą	1.9	TBD	TBD	TBD	0.133	TBD	$1.2 \times 10^{-3}$	
FO-5	N/A									
FO-6	N/A								٠	
FO-6A	N/A									
FO-7	N/A									
FO-8	N/A									
FO-9	Vent						0.133	TBD	$1.2 \times 10^{-3}$	
FO-10	N/A									
FO-11	N/A			•						
	<b></b>							<b>T</b>		

#### 1.7. DATA SYSTEM REQUIREMENTS

This section describes the Space Station Furnace Facility (SSFF) Data Management System (DMS) and the data system requirements of the SSFF to Space Station Freedom (SSF). The SSFF DMS contains the electronics for control and monitoring of subsystems associated with SSFF Core and Furnace Module-1 operations, including the Thermal Control Subsystem (TCS), the Power Conditioning and Distribution Subsystem (PCDS), and the Gas Distribution Subsystem (GDS). In addition to these subsystem tasks, the DMS also monitors and controls the unique functions of Furnace Module-1 including closed loop control of heater temperatures via thermocouple inputs (and other sensors), sensing and control of furnace translation (i.e., movement of the relative sample position to the hot/cold zones), and sensing and control of the Furnace Module-1 actuators and effectors. The DMS provides a communications media for the facility, stores digitized experiment data, and provides an interface to the SSF DMS. The SSFF DMS, as shown in Figure 1.7-1, consists of the Core and distributed components. Subsections 1.7.1 through 1.7.5 and Tables 1.7-1 through 1.7-5 define the DMS interface data and resource requirements of the SSFF.

#### 1.7.1 SIGNAL INTERFACE DEFINITION

Table 1.7-1 defines the following data signals and control:

- Onboard and uplink commands to the SSFF and SSFF Furnace Module-1
- Routing of SSFF Core housekeeping data
- Routing of Furnace Module-1 housekeeping data
- Routing of Furnace Module-1 science data

#### 1.7.2 SIGNAL INTERFACE DEFINITION EXPANSION

Table 1.7-2 is an expansion of the data from Table 1.7-1.

### 1.7.3 EVENT/EXCEPTION MONITORING REOUIREMENTS

Onboard event and exception monitoring requirements for SSFF and Furnace Module-1 are defined in Table 1.7-3.

# 1.7.4 PAYLOAD OPERATIONS INTEGRATION CENTER DISPLAY REQUIREMENTS

The Payload Operations Integration Center (POIC) controls all payload operations and is equipped with consoles for data management, operations control, and mission planning. The data to provide this capability are shown in Table 1.7-4.

## 1.7.5 POIC LIMIT SENSING/EXCEPTION MONITORING REQUIREMENTS

Limit sensing and exception monitoring is provided to the POIC via downlink and is defined in Table 1.7-5.

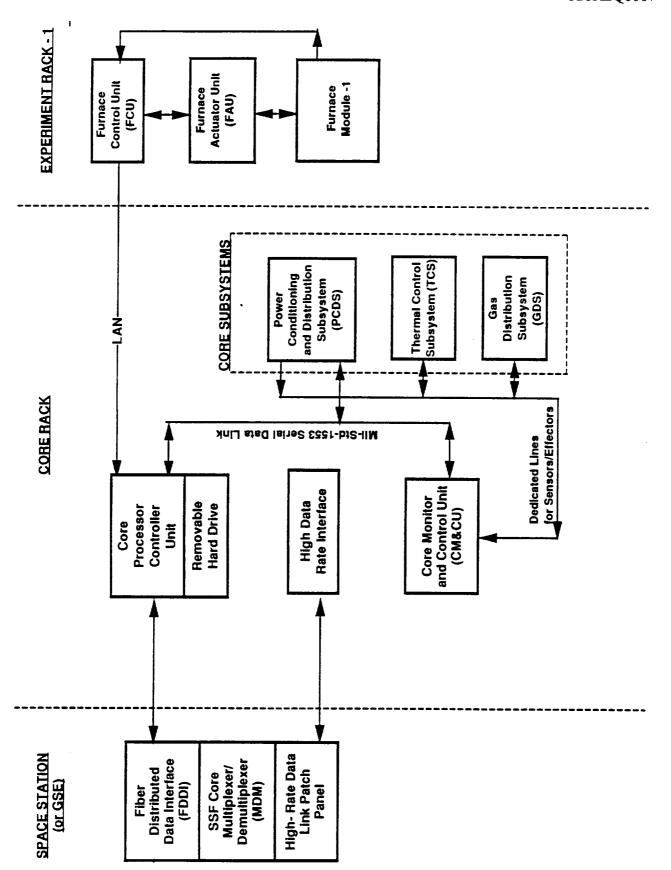


FIGURE 1.7-1. DMS INTERFACE BLOCK DIAGRAM

TABLE 1.7-1. SIGNAL INTERFACE DEFINITION

	567 890 123 4 567 89'
C S D I N SER.DATA   E E C S R ///////////////////////////////////	1. 5
C S D    M I E    M I E    D G F    NO.    DESCRIPTION   U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A     U A	900 SSF CMDS & S/W PATCHES 10 SSFF 1 2 2 3 1 2 3 4567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890124567890100000000000000000000000000000000000

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 1 of 38)

	1101	I MM I MM I				
<u>U</u>	S E	150108	Olyl	DESCRIPTION MONIC	<u>.</u>	1//////////////////////////////////////
<del>-</del> 0	IDIA	1.5	P START  END	DATA VALUE     I.	CHEC	CIRCISID IF IT
R .  DESCRIPTION	<u>9</u>	_	F E	3 3	OIIO	 - <u>×</u>
× -	10 E	= :	_	IXIAI	TID	
	<u> </u>	<u>-</u> -		PI INICIOI	3 l E	<u> </u>
	- LW -	- !		E) TIPIF!	<u> </u>	131 al
107 SSFF HOU	188	_			-	141121
	IQI	101	1 18100100100100			131161
Process Elap	s     DG	101			= =	11411
202 106 CGF Sytstem State	100	101103	100/100/01/1		<u> </u>	7 7 7
Number (Mode)	100	101	061 101001101001151		<u> </u>	3331411
sed Time	_	101	10100110101		X	411
Liapsed II		101	101011101		X	13335 41 2
בכ	1 × 1	101	1601001		IXI	13336 41 2
Upper H			041001041		ΙX	13337/41/2/
Upper A			1601001601	IXIXI	X	13338141121
Cold End Shell Tem	1 V I				X.	13355 41 2
Hot End Shell			<u> </u>		<u>-</u>	41
Nignment 7	IA		115100 14		Ξ:	_
	TAL		110015	- X	Ξ:	411
215 106 IFEA Absolute Pressure 1	I		11001011	- X	<u>-</u>	41
			11810011		<u>.</u>	41
106 Furnace Linear Position	IAI		100		<u>×</u> :	41
218 106 Indexing CAM Rotary Position	IAI	_	1201001201		= =	
106 Experiment Ma	IAI	_	121 00 121	· · ·	= =	7 7 7
106 Experiment Ma	AI	101	122   00   22		<u> </u>	
106 Water Outlet Vlv RCCB Off	l  en	101	B 23 00 23 00		X	2501411
VIV RCCB	_ _ _	101	123		X	41
106 IFEA COLANT FISH #1	Idl -	101	1231021231		IX.	661411
106 Washing West Will page off	_	101	12310312		ΙX	13367 41 121
106 Wacuum Went VIV RCCB OIL	_ ·	101	1231041231	- - -	ΙX	3368 41 2
1061Hat Barat West NECKS On S	_	101	<u> </u>	<u>-</u> - -	X	411
Boost Mod A RCCB Off	- -	101	1231061231		X	370 411
106 Hot Beest Med A RCCB On S	_	101	<u> </u>		X	371   41
BOOST MOG B KCCB OFF	- 8	101	123	- - -	I X I	13372141121
230 100 HOT BOOST MOD B RCCB On Status	IQI –	101	IB 23 09 23 09		IX.	373 41
	  -					
0 0 0	3 4	4			- r	- r
	0 6	3 5	78 1 3 5	5 6 7	- c	ο α υ '
			,	- >	7 1	٥

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 2 of 38)

!		1	1	1 1	11111	1			       		;
	1010	Ξ	MN I NM	SIT	DAT	A DES	DATA DESCRIPTION	HONICI	?		
	SIWI	180	SOIC	ININ	1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_	- :	! - !	;
ENTIC NI	PIO	_	5/	르	START	END	_		2 2	CIRCISID IE	
<u>-</u>	5	_	3	FE		1	<u>-171</u> -	E   E   -	lotial	- ·	
	1112	-	Ω.	_	WDIBTIWDIBTIY	MD B	LIXI		Ξ	10	_
<u>~</u>	1 1		S	_	_	-	l a l	<u>၁</u>	=	<u> Е</u>	<u> </u>
	X	<b>-</b>	2	<u>a</u>	_		<u> E</u>	TIPIF	-   -	- :	1
			-		01166	2311		-	X	1337414	11/2/
m Mod RCCB	Stati					2311		_	X	133151	41   2
3211061COLD Main Prim Mod RCCB	itat	_	<del>-</del> :		5 6	1000		- - -	I X I	133761	41   2
in Prim Mod A RCCB	Stati	_ :	110	9	21   62				X	133771	41   2
34 106 HotMain Prim Mod A RCCB	Stat	-	170					. – . –	ΙXΙ	133781	41   2
Valve RCCB	f Stat		110		; ;	; ~	151	- - -	X	133791	41   2
٧a	Status	10	1 1 1		1 0	24	-	X	IX I		41   2
106 PDS Airflow 1				-	-	2	011	X	IX.		41   2
106 SCS Airflow 1			10	8	4	124	021 1	x	X   -		_
<b>→</b> (		-	011	<u> </u>	24   03	124	031 1:0	X	X -	_	
3 ;	Status	-	011	<u>B</u>	124   04	124	041 1	_ _ _	<u>×</u>		
Valve noce	Status 1	_	011	<u> </u>	124105	1241	051 1	- - -	<u>-</u>	-	-
Valve RCCD		_	011	<u>8</u>	_	1241	1 190	- - -	<u>×</u>	3386	
S C C		_	011	<u> </u>	124107	1241	071 1	<u>-</u> - -	<u>×</u>	133871	
מר בר	Ctat	_	10	<u>B</u>	_	24	1 180	<u>-</u> -	<u>×</u>	133881	
106 Peltier Conn	oret		1 6		_	24	1 160	- - -	<u> </u>	13389	_
106 Peltier Conn Motor Acce	Stat -	_	10	B	_	24	101	- - -	<u>×</u>	133901	_
106 Cold Main Red Mod	Stat		011	<u> </u>	2	_	111	- - -	X	13391	41   2
106 Cold Main Red Mod		-	011	<u>B</u>		24	121 1	- - -	X -	3392	41121
106 Hot Main Prim Mod B	On Stat!	-	011	<u> </u>	B 24 13	1241	131 1	- - -	X -	133931	
106 Hot Main Film for B	Status	_	011	<u>B</u>	124114	1241	141	<u>-</u> -	Ξ-	9334	17 16
106 Hot Guard Module	Status	-	10	<u> </u>	124115	1241	151 1	<u>-</u> -	Ξ_	3395	
52 106 Hot Guard Module ACCB	Status!	-	011	<u>B</u>	125 00	25	1 100	<u> </u>	Ξ -	3252	41121
Puising Mod Acce	Status	_	011	<u> </u>	125 01	125	1011 1	- - -	<u>×</u>	(3253	
Fulsing and Acce	Statual	_	011	<u> </u>	125102	25	021 1	- - -	<u>~</u>	13396	
55 106 IFEA ABS FIESS Z NCCB	tratus -	_	011	- HB	125103	25	031 1	- - -	<u>×</u>	13397	_ ;
56 106 IFEA ABS Press 2 RCCB		_	10		125104	125	041	- - -	<u>X</u>	13398	_ ;
57 106 IFEA ABS Press I RUD	Status -	_		-	B125105	25	1 150	<u>-</u> - -	<u>-</u>	13399	41
58 106 IFEA ABS Press 1 ACCB	Status			-	B125106	251	1 190	<u>-</u> -	<u>х</u> –	13400	411
1259 106 Vacuum Vent Valve Closed	tatus		011	- <del>-</del>	25	07   25	071 1	_ _ _	<u> </u>	13401	121161
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-		-			-	-	-
	_ ·			_ <	_ 4	<b>–</b> մ	– տ	. 9	1 1	1 1	ဆ
000	E	4	4	ים קייו	o -	n c	U 1		1 2	5 8	0
	6	0	m	- 2	<b>⊣</b>	٦	۰ ،	י י	1	ı	

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 3 of 38)

	010	SIMNINMI	E :	DATA DES	DESCRIPTION	NOWI	-	111111111111111111111111111111111111111	
		so los l	<u> </u>	į	•	REO			í
	<u> </u>		- G	AKT   END	DATA		<u></u>	CIRCISID	E
-	2 12	= =	3 -		<u>                                   </u>			DITOINO.	X
	2 3					) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (		<u> </u>	H H
	×	<u> </u>		- - -	<u> </u>	TIPLE		<del>-</del>	
261 106 Argon Fill Valve Closed Status	101	101	1 18125	108125108	81 1		- X I	1340	2141121
262 106 Argon Fill Valve Open Status	IOI	101	1 IB125	109125109	-		-	, c	
in Red Mod	101	<u> </u>	2	25.				2000	7 7 7 6 1 7
Mod A RCCB On S	IO	1011	2	1125		 		1305	1711616
	Idi	101	2	112125112			= =	1940	
Outlet Valve Bypass	IOI	011	2	25	 : <del>=</del>	<u> </u>	<u> </u>	3405	1 2 1 1 1 1 2 1
106 Water Inlet Valve N	Idi	101	2	114   25   14	. <b>-</b>	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	3406	7
r Inlet Valve Bypass	Id	101	2	115   2		<u>×</u>	<u>X</u>	13407	41
106 Fail Safe Brake RCCB Off	Idi	101	B 26	100126100	<u>-</u>	_	X	13408	41
Safe Brake RCCB On St	Idi	101	12	10112	_ _	<u>-</u>	X	13409	411
106 Core Hold Down	IQ!	101	2	02   26	- -	- - -	X	341	0 41   2
Hold Down	IQI	101	7	03 26	- =	<u>-</u> -	IXI	1341	1   41   2
Hold Down	Id	101	2	04 26	<u>-</u>	<u>-</u>	<u>X</u>	1341	2 41 2
106 Core Hold Down Extended	Id I	101	2	05 26	- -	- - -	<u>X</u>	1341	3 41 2
106 Core HD Motor RCCB Off	101 -	101	2	06 26	_ 	- -	X	1341	4   41   2
106 Core HD Motor RCCB On State	IQI -	101	2	07 26	- -	- -	X	1341	5 41   2
1061Step Motor Clutch RCCB Off	10	101	2	1081261	_ =	_ _ _	X	1341	6 41 12 1
1061Step Motor Clutch RCCB On	Id:	101	2	1091261	- -	- - -	X	1341	7   41   2
106 Step Motor Drive RCCB Off	10.	101	_	10 26	- =	<del>-</del> -	I XI	41	8   41   2
10015tep Motor Drive RCCB On Stat	IQ	101	_	11   26   1	<u>-</u>	<u>-</u> -	<u> </u>	1341	9   41   2
106/Rapid Xiation Clutch RCCB Of	Id	101	2	112126112	_	- -	X	1342	0 41 2
Clutch RCCB (	Id	101	_	13/26/1	_	- -	IXI I	13421	41   2
106 Banid Vistian Mer ReeB Off	10	110	_	14   26	_ ·	- - -	<u> </u>	1342	41
100  napid Alacion	101	101	_	15   26	_ _	<u>-</u> -	Ξ -	1345	3   41   2
1203 100 Fulliace Fosition Not Home	101	101	2	00   27	_	<u>-</u> -	X	1345	4   41   2
TON HOME	10.	101	_	177	_	_ _ _	-X	N.	5   41   2
ILAT	10	101	_	02   27	_	X	X	1342	6   41   2
Trvi Exce	Id	101	_	03   27	<u>-</u>	<u>X</u>	X   -	13427	141121
IUb   Ampoule Alignment Not Ret	Id	101	7	04   27	<u>-</u>	<u>-</u> -	X	13428	141121
ZyU IU6 Ampoule Alignment Retracted	IDI	1011	IB 27	05127105	_	_ _ _	I X I	13429	141121
_	_	<b>-</b>   -	_ _						-
	3.4	4	4 4	5 5 5	ഹ	9 9 9	7 7		- 00
3 67	0 6	3	7 8	1 3 5	7	5 6 7		ຸທ	· c
		,		,	•	· >	1		

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 4 of 38)

	ICIU	SIMNINMI	- L	DATA DESCRIPTION	TION   MONICI	////1	1111111111111
ENTICN	S W	X lolsolos l	_	1	REQ		
10 01	N I D	16.1/6	<u>a</u>	END	DATA VALUE  L	CIRCISID	SID E T
R .   DESCRIPTION	2 6	<u> </u>		WOLBELWOIRELY!		TI DI	<u> </u>
	2 -			B	INICIO	<u>교</u>	· –
 	X	<u>'</u>		<u>=</u>	ITIPIE	_	131 dl 1
	101	1011	1 IB127106	51271061 1		1,1	13430 41 2
Tool Ampounte Attignment not		5 5	127	2	· -	X	13431141121
106 Ampoule Alig			2	2		X	13432   41   2
106 Ampoute Align mer need of			127			X	13433141121
106 Ampoule Align McI	101		127			<u>X</u>	3434 41 12 1
Ampoule support	101	101	1271	27		X	13435 41 2
106 Ampoule Support	Id	101	1271	2   27   12   1	_ _ _	X	41
106 Ampoule Support Secu	Idl	101	IB 27 11	31271131 1	_ _ _	<u> </u>	41
06 Ampoule Spt Plt	Idl	101	12711	_	_	Ξ	41
106 Ampoule	ti IDI	101	12711	5 27 15	_ _ _	<u> </u>	41
uard M	Id)	101	28	_		Ξ:	411
130211061Cold Guard Mod RCCB On Status	Idl	101	B 28 01	128	_	X	411
303 106 Carousel Spacer Plt Gap Lim-Not	IOI	101	28	1281	_ _ _	<u> </u>	41
Spacer Plt	I IDI	101	IB 28 03	1281	_ _ _	X	41
Cam Not Sto	IO!	101		1281	_ _ _	X	41
	Idl	101	IB 28 05	1281	_ _ _	X	41
106 Carousel	Id!	_	1281	128		<u>-</u>	41
308 106 Carousel Trk Extr Left Limit	_	_	~	1281		<u> </u>	41
	_	_	1281	28		<u>-</u> :	411
Lim	_	_	28	12810	_ ·	I X	1 4 1
106 Hot Main Red Mod B RCCB Of	_	_	1281	8		<u>-</u> -	13256141121
106 Hot Main Red Mod B RCCB C	_		281	1   8   1			
106 SEM	101		1 1812811	13128 12		- <del>-</del>	41
Tow CCW St.			1281	281	_	IXI	13450 41 2
100 SEM INGENTING SON CON	10	-	281	28	-	IXI	13451   41   2
1106 Jamonile Not Processi	10	_	29	2	_	X	13452 41 121
1061 Amount of Droce	IGI	_	B 29 01	_	_	I XI	13453 41 2
1106 Svstem Bus R	Idl		29	021291021 1	X	IXI	54   41
106 System Bus Relay On S	IOI I	101	1 1812910	031291031 1	X	X   -	3455 41 2
	-					- -	- -
c	- (r	. 4	4 4 5	. 2	9 9 9	11	7 7 8
	· c	יער			5 6 7	1 2	5 8 0
3 67	ν >	ר ח	0			1	)

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 5 of 38)

- N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C - N C	ICIU	MN NW	SITI	DATA DE	DESCRIPTION	I MONIC		111111111111111111111111111111111111111	////	1////
	V Q	5	- <u>a</u>	START! END	DATA	VALUE     I	 -	CIRCISID	QI	
ď	9	_	-		-11	EIEI	_	DITOIL	_	×
- <u>R</u> -	IOE	<u>a</u>	I IMD	BTIWDIBT	3T   Y	IVIXIC	_	TI DI	_	P   B
- <u>-</u> -	<u> </u>		* ×	- = -	1 <del>6</del> 1		_	31 E1	_	17
	IK.		101	-	<u>=</u>	ITIPIE	<u></u>	<b>-</b>	=	D  E
321 106 Peltier Pulsing Drv RCCB Off St	Idi	1011	B 29	B1291041291	041 1	- - -	_	<u> </u>	32601	41   2
322  106  Peltier Pulsing Drv RCCB On Stat	Idl	101	B 29		051 1	<u>-</u> -	_	χ <u> </u>  :		41   2
001   850   Sync	_	1021	_	<u>-</u> -	_	- -	_	<u> </u>	_	41   2
002 850 Frame Count (SFID)	_	1051	_	<del>-</del> -	<u>-</u>	- - -	_	_	_	41   2
850 Spacelab Exper	_	1021	_	<u>-</u> -	<u>-</u>	- - -	_	<u>-</u>	_	41   2
850 Sample N	_	1021	_	_	_	- - -	_	<u>-</u>	_	_
850 Mission ID	_	1021	<u>-</u>	- - -	<u> </u>	<del>-</del> -	_	<u> </u>	_	41   2
850 Furnace Position	_	1021	<u> </u>	- -	<u>-</u>	<del>-</del> -	_	<u>-</u>	-	_
850 Furnace Position Home	_	1051	<u>-</u>	_ _	<u>-</u>	<u>-</u> -	_	<u> </u>	_	_
850 Furn Extreme Trvl	_	1021	_	- -	<u>-</u>	<u>-</u> -	<u> </u>	<u>-</u>	_	_
850 Furn Extreme Trvl E	_	1021	<u>-</u>	- -	<u>-</u>	<u>-</u> -	_	<del>-</del>	_	_
850 Core Hold Down	_	1021	_ _	- -	_	<u>-</u> -	_ _	<del>-</del> -	_	_
850 Core Hold Down Retr	_	1021	<u>-</u>	<b>-</b> -	_	<u>-</u> -	_	<u>-</u>	_	_
850 Core Hold Down	<u>-</u>	1021	<u>-</u>	<u>-</u> -	<u>-</u>	<u>-</u> -	_	<u>-</u>		41   2
850 Core Hold Down Extended	_	1021	<u>-</u>	_ _ _	<u>-</u>	<u>-</u> -	_	<u>-</u> -	_	_
850 Water Outlet Valve Normal	_	1021	<u>-</u>	- -	<u>-</u>	<u>-</u> -	_	<u>-</u>	_	41   2
850 Water Outlet Valve Bypass	_	1021	<u>-</u>	_	<u>-</u>	<del>-</del> - -	_	<u>-</u>	_	_
850 Water Inlet Valve Normal	_	1021	_	_ _ _	<u>-</u>	<u>-</u> -	_	_	_	
850 Water Inlet Valve	_	1021	<u>-</u>	- - -	<u>-</u>	<u>-</u>	_	<u>-</u>	_	41   2
850 Vacuum Vent Valve	_	1021	_	<u>-</u>	_	_ _ _	_	<u>-</u>	_	_
850 Vacuum Vent Valve Clos	<u> </u>	1021	_ : _ :	·		_ ·		<u> </u>	_	_
UZU  BSU  Argon Fill Valve Open Status	 	1701	<u>-</u> -			 		<del>-</del> -		
		1701		 	 	 		 		12115
Support	 	1021	 	 		 				
850 Ampoule Alignmen		1021	·	- - -		- - -	_	- -	_	_
Φ	_	1021	_		_	<u> </u>	_	_	_	_
0	_	1021	_		<u>-</u>	<u>-</u> -	_	_	_	41   2
027   850   Ampoule Alignment Extended	_	1021	<u>-</u>	<del>-</del>	<u>-</u>	<del>-</del> -	_	_	_	41121
028 850 SEM Indexing Jog.CCW Status	<u>-</u>	1051	<u>-</u>	<del>-</del> -	_	<del>-</del> -	_	- -	_	41   2
! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	-		-				<b>-</b>	! ! ! —		-
0 0 0	ω 4	4	4		. v	9 9 9	7	٠.	, ,	- ∞
9	0 6	3 5	7 8	e	5 7	567	_	2	2	0

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 6 of 38)

\		SIMNINMI	ISITI	DATA	DESCRIPTION	_	MONICI	///	,,,,,,,,,,,,,,,,	1/////	
	SW	solosi	1 X I O I	ł			REQIA	-		i	
<u> </u>	IDIA	16.1/6	la l	RT	END   DATA	DATA VALUE			CIRCISID	I E	
R .   DESCRIPTION		3 4	-   S   S	1.	111		N X I X I X				
	= - - -	2 -		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	101	_	01012		- E		_
	<u> </u>	<u> </u>		<u> </u>	<u> </u>	-	TPF	. —	-	10 E	_
		1001	-					-	:    -	41 2	
<b>_</b>		200	 		 	-	_	_	_	141   2	_
850   Ampoule	 	100	 		 	_		_	_	41   2	_
850 Ampoule Processin		700	 	 	 		- - -	-		141   2	_
850 Indexing Cam		70	 	 	 		-	· –		_	_
850 Indexing Cam Stowed	 	70	 		 		-		_	4112	_
850 Peltier	 	102	 	 	- - - -		- -	- -	_	41 2	_
850 Faltier Connector	 	1021	- - -	. <u>-</u>	_		<u>-</u>	_	_	14112	_
850 Peltier Connector Not	 	1021	- - -	·	- - -		_ _ _	_	_	_	_
850 Feltier Connector		1021	- - -		_ 		_ _	_	_	-	_
850 Ampoule 4 Failure 2	- - -	1021	- - -	. – . –	_ _ _		_ _ _	<del>-</del>	_	_	_
e 4 Failure 2		1021	- - -	_	- -		_ _ _	<u>-</u>	_	_	_
e 3 Failure 1	- -	1021	_ _ _	_	- -		_ _ _	_	_		_
e 2 Failure 2	_	1021	<u>-</u>	<u>-</u>	- - -		_ _ _	_	_	_	
850 Amoule 2 Failure 1	_	1021	<u> </u>	_	_ _ _		_ _ _	<u> </u>	_		_
850   Ampoule 1 Fa	_	1021	_ _ _	<u> </u>	- - -		_	_ ·			- :
850 Ampoule 1 Fa	_	1021	<u>-</u> -	- -	<u>-</u> -		_ ·	_ :			_ :
850 PDS Airflow	_	1051	<u>-</u>	<u> </u>	_ _ _		 	 		21161	
_	_	1021	_ _ _	_	_ · _ ·		 				
850 IFEA ABS Press 2 RCCB Off	Status	1021	_	- -	- : - :		 	 			
1049 850 IFEA ABS Press 2 RCCB On Status	ns	105	_ _ _	<u> </u>	<u> </u>		 	 			
050 850 Spare RCCB Off Stat	_	1021	_ ·	<u> </u>	 		 	 			
n Stat	- -	1021	- ·	- ·	 		 	 			
052 850 IFEA Coolant Flow #1 Status		1021	- · - ·	- ·				 			
850 SCS Airflow 1 Status	_	1021	_ _ _	_	- · - ·		 	<b>-</b> -			
1054 850 Cartridge 2 Failure 2 Status	_	1021	_	_	  		 	 			
10551850 Cartridge 2 Failure 1 Status	<u>-</u>	1021	_ _ _	_	_ ·		 	 			<u> </u>
1056 850 Cartridge 1 Failure 2 Status	_	1021	_ _ _	- -	_ ·		<u> </u>	 			7 0
850 Cartridge 1 Failur	<u>-</u>	1021	_ _ _	_	_ ·		 				7 -
058 850 Ampoule 6 Failure 2 Status	<del>-</del>	1021	- - -	- -	-   -	1	-		-	- 1	<u>-</u>
;		_	-	-	- -	_	_	<u>-</u>	<b>-</b>		_
- c	· 6	4	4 4	5 5	5 5	9	999	11	7	7	8
	0	m	5 7 8		2	Δ,	5 6 7	1 2	S		0
3 6 /		1		,							

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 7 of 38)

- N CENG	CIO	MNINMI	SITI	DATA	DESC	DESCRIPTION	_	MONIC		111111111111111111111111111111111111111	////	////	
	2 4	3 0		START	CND	IDATA VA	VALUEL	NEX IA	_ =	נומוט	STD	-	
		3	_					61		201			
	IUE	<u> </u>	I WD	BT	BTIWDIBTIY	χl	_	VIXIC		T D	_	P 1B	· <del>_</del>
_ <del></del> _	17	_	‡ - - X	<u>*</u>	_	P I	=	$\frac{\circ}{}$	<u>-</u>	_	_	_	<u>-</u>
	X	- - -	<u> </u>	-   -	<b>-</b>	<u>교</u>	_	TPF	- -	<b>-</b>	_	<u>=</u>	_
059 850 Ampoule 6 Failure 1 Status	_ 	1021	_ _	-	_		-	_ _	_	_	-	4112	· <del></del>
060 850 Ampoule 5 Failure 2 Status	<u>-</u>	1021	_	_	_	_	-	_	_	_	_	41   2	_
061 850 Ampoule 5 Failure 1 Status	_	1021	_	_	_	_	_	_	_	<u> </u>		41   2	_
062 850 Water Outlet Vlv RCCB Off Status	_	1021	<u>-</u>	<u> </u>	_	_	-	_	_	_	_	41   2	<del></del>
. V.	_	1021	_	_	_	_	_	_	_	<u>-</u>	_	41   2	_
Vlv RCCB Off	_	1021	<u>-</u>	_	_	_	_	<u>-</u>	_	<u> </u>	_	_	_
850 Vacuum Vent Vlv RCCB	_	1021	_	_	_	_	-	_	_	<u> </u>	_	_	=
850 SEM Index Motor RCCB	_	1021	_	_	_	_	_	<u>-</u>	_	- -	_	_	
or RCCB On	_	1021	<u>-</u>	<b>-</b>	_		_	<u> </u>	_	<u> </u>		_	_
RCCB Off	_	1021	_	_	_	_	_	<u>-</u>	_	_	_	_	_
HD Motor RCCB On Sta		1021	_	_	_	_	_	<u>-</u>	<u> </u>	_ _	_	_	_
Boost Mod A	_	1021	_	_	_	_	-	<u>-</u>	_	_	_	41   2	_
850 Hot Boost Mod A RCCB On S	_	1021	_	<u> </u>	_	_	-	<u>-</u>	_	_	_	41   2	<del>-</del>
Boost Mod B RCCB Off	_	1051	<u> </u>	_	_		_	<u> </u>	<del>-</del>	_	_	41   2	_
850 Hot Boost Mod B RCCB On Stat	_	1021	<u>-</u>	_ _	_	_	_	<u>-</u>	_	_	_	41   2	<del></del>
850   Cold Main Prim Mod RCCB	_	1051	_	<u>-</u>	_	_	_	<u> </u>	_	<u> </u>	_	_	_
850 Cold Main Prim Mod RCCB On S	_	1021	<u> </u>	_	_	_	_	<u> </u>	_	_ _	_	_	_
850 HotMain Prim Mod A RCCB Off	<u>-</u>	1021	<u> </u>	_	_	_	_	- -	_	<u> </u>	_	_	_
850 HotMain Prim Mod A RCCB	_	1021	<u>-</u>	<u>-</u>	_	<u>-</u>	_	_	<u> </u>	_	_	_	7
850 Carousel Trk Extr Right	_	1021	<u>-</u>	-	_	_	_	<u>-</u>	_	_	_	_	2
850 Carousel Trk Extr Ri	_	1051	_	<u>-</u>	_	_	_	<u> </u>	<u> </u>	- -	_	_	7
850 Ampoule Support	_	1051	_	_	_	<u></u>	_	_	_	_	_	-	-
850 Ampoule Support Secure	_	1021	<u> </u>				_	<u> </u>	_	_	_	-	- 5
850 Carousel Trk Extr Left	_	1021	_	_	_	_	-	_	_	<u> </u>	_	_	-
850 Carousel Trk Extr Le	_	1021	<u>-</u>	_	_	_	_	_	_	_	_	_	7
850 Carousel Spacer Plt Gap	_	1021	<u>-</u>	_	_		_	<u>-</u>	_	<u> </u>	_	_	7
l Spacer Plt,	_	1021	<u>-</u>	_		<u>-</u>	_	<u>-</u>	_ _	_	_		7
850 Ampoule Spt Plt Mtr RCCB	<u>-</u>	1021	<u>-</u>	_	_	_	_	_	_	_	_	41   2	7
Spt Plt Mtr RCCB On	<u>-</u>	1021	<u>-</u>	_	_	_	_	<u>-</u>	_	_	_	41   2	2
1088  850 Ampoule Align Mtr RCCB Off Stat	_	1021	<u>-</u>	_	_	<u>-</u>	_	_	_	_		41   2	7
	  -		<u> </u>		<u> </u>	: : : : : :	! <b>-</b>	-	! —	- - -	  -	:	1 _
	. 4	4	4	. v		. س	. ve	وب	, ,	٦.	7 7	· u	- α
			, α			ĵ		רא	_	۰ ،	· α		· ~
		י י	0	) <b>-</b>		_	ז	-	-	7		,	_

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 8 of 38)

01	clu		DATA		DESCRIPTION	MONICI	11111	,,,,,,,,,,,,,,,,	i///
CNI	SE	XIOISOIOS	CTADT!	UNG	LDATA VALUE	-   REQ   A		SID (E	
NO.100   O O O O O O O O O O O O O O O O O O	<u>د</u> ب <u>ح</u>	- 14 - 14 - 14 - 14 - 14 - 14 - 14 - 14		- 1		<u> </u>	DI IOI NO.	-	
	OE	i _	WDIBTIWDIBTIY	WDIBI	X		II D	<u>a l</u>	_
			_	-	I B I	$\overline{c}$	3   E	-	11
	<u>×</u>		_	_	<u>Е</u>	TIPIE	- -	-	<u>=</u>
- Doolesolamonile Alian Mr. RCCB On Stat.	<u> </u>	1021	-		_ 	- - -	- -	7	11   2
830 Miletor Inlet Valve RCCB Off		1021		<b>-</b>	_	- - -	_	-	_
SSOUMMENT INTER VALVE RCCB OF S	-	1021	_	_	_	<u>-</u> -	- -	-	41   2
850 Argon Fill Valve RCCB Off		1021	_	_	_	- - -	- -	<u>-</u>	_
850 Argon Fill Valve	_	1021	_	_	- -	- - -	<u>-</u>	<del>-</del>	_
850 System Bus Relay	_	1021 1 1	_	_	<u>-</u>	- - -	_	<u> </u>	_
850 System Bus R	_	1021 1 1	_	_		_ ·		<u> </u>	
096 850 IFEA Coolant Flow #2 Status	_	1021 1	_	_	_ ·	 			7117
850 PCS Airflow 2 Status	_	1021 1		<u> </u>					41   2
6 Failure 2	_	1 1 1 201			 				
850 Cartridge 6 Failure 1		1021				 			
850 Cartridge 5 Failure 2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>-</b> -			 			
850 Cartridge 5 Failure 1		1051		 		 			
850 Cartridge 4 Failure 2		1051				  			41121
850 Cartridge 4 Failure 1		1 1701		 	<b>-</b> -				
850 Cartridge 3		1021			 		- 		-
850 Cartildge 3 Fallure 1		1001		- -	 	. – . –	. <u>-</u>		41   2
100		1021	. <u>-</u>	. <u>-</u>	. <u>–</u>	- - -	_ _	_	_
Drive	. —	1021	 	_ _	<del>-</del>	<u>-</u> - -	<u>-</u>	- -	_
850 Step Motor Drive	_	1021 1 1	<u>-</u>	<u>-</u>	_	_	<u>-</u> :	_	
ABS Press 1	_	1021 1 1	_	_ _	_	_ ·			
Sta		1021 1	<u>-</u> .	_		 	<u> </u>		41121
RCCB Off	_	1021 1	- -	_ ·	<u>-</u> .	- · - ·			
RCCB On	_	1021	_	- ·	·	 	<u> </u>		17 17
RCCB Off	_	1021	_	<u>-</u> ·	_ ·	- · - ·	 		
lutch RCCB On Stat		1021 1 1	_	_	_	 	<u> </u>		
850 Rapid Xlation Clutch RCCB Off	_	1021		<u> </u>				<b>-</b> -	41   2
n Clutch RCCB On	_	1021 1	<u> </u>	_ ·	<b>-</b> -		 		17 17 1
118   850   Rapid Xlation Mtr RCCB Off Stat	_ :	1021 1 1	-   - !	-   -	-			-	- 1
	_	- -	-		_	- -	<u>-</u>	. — —	_
0 0 0	3 4	4 4 4 4	5	5	2	9 9 9	۲ ر	ر ر.	<b>co</b> (
	0 6	3 5 7 8	1			2 6 7	1 2	ъ В	5

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 9 of 38)

1	n l o l	I WN I NH	SITI	DATA D	DESCRIPTION	ION	MONIC	-	111111111111111111111111111111111111111	1111	1///
	S W	_		!	!		REO	- -	1	1	1
<u> </u> 0	¥iai	16.1/61	교	START END	_	DATA VALUE	_	- -	CIRCISID	_	<u>п</u>
IR .  DESCRIPTION	9	_ <u>*</u> _	亘		_		<u> </u>	- -	N I OI I O	_	_
_ <del>_</del>	101	_ _ _	I MD	BTIWDIBT	_		IVIXIC		TI DI	_	P  B
	<u> 1</u>	_	* *	<del>-</del>	l d l		INICIO	_ =	3       	_	171
<b>-</b> -	IKI	- -	- - - -	_	<u> </u>		TIPIF		<del>-</del>	_	D IEI
111918501Rapid Xlation Mtr RCCB	On Status!	1021	-			† ! ! !	  -  -	: – ! –	- -	-	41121
ake RCCB	ff	1021	-	· <del>-</del>	- -		- - -	-		_	41121
Cafe Brake BCB	Ctatus	1001	- -		- <b>-</b>		- - -				41121
Main Dod Mod DCC	_ <	200					 				
Mod PCR		200	 				 				41121
Mod. B RCC	CB Off Stal	1021							- - -		
Mod	ő	105	- -	_	_		- -	_	- -	_	_
850 Hot Guard Module RCCB	Off Status	1001	_	- -	_		<u>-</u>	_	_	_	41   2
127 850 Hot Guard Module RCCB C	On Status	1051	_	- -	_		_	_	_	_	41   2
Mod RCCB	Off Status	1051	_	_ _	<u>-</u>			_	<u>-</u>	_	41   2
129   850   Mech Pulsing Mod RCCB (	On Status	1051	<u>-</u>	_ _ _	<u>-</u>		<u>-</u>	_	<u>-</u>	_	41121
130   850   Hot Main Red Mod A RCCB	B Off Stat	1051	_	<u>-</u>	_		_	_	_	_	41121
Mod A F	B On Stat	1051	_	_ _	_		_ _ _	_	_	_	41   2
132 850 Cold Guard Mod RCCB Off	f Status	1021	_	_	_		<u>-</u>	_	_	_	41   2
133 850 Cold Guard Mod RCCB On	Status	1051	_	_	_		<del>-</del>	_	<u> </u>	_	41   2
Mod	B Off Stat	1051	_	_	_		<del>-</del>	_	<u>-</u>	_	41   2
135 850 Hot Main Red Mod B RCCB	0	1051	<u>-</u>	<u>-</u>	_		<del>-</del>	_	_	_	41   2
Pulsing Drv	CB Off St	1051	<u>-</u>	<u>-</u> -	<u>-</u>		_ _ _	- -	<u>-</u>	_	_
137 850 Peltier Pulsing Drv RCCB	CB On Stat!	1051	<u>-</u>	- -	_		<u>-</u> -	- -	<u> </u>	_	41   2
	_	1051	<u>-</u>	<u>-</u>	_		- - -	_	<u>-</u>	_	_
850 Sample to	_	1051	<u>-</u>	<u>-</u>	<u>-</u>		_ _ _	_	- -	_	_
to	_	1051	<u>-</u>	_ _	<u>-</u>		_ _ _	_	<u>-</u>	_	_
141 850 Sample to Process #4	_	1051	<u>-</u>	<u>-</u> -	<u>-</u>		<u>-</u> -	_	<u>-</u>	_	_
850 Sample to	_	1051	<u>-</u>	<u>-</u>	<u>-</u>		<u>-</u> -	_	<u>-</u>	_	_
143 S850 ample to Process #6	_	1051	<u>-</u>	<u>-</u> -	<u> </u>		<del>-</del> -	_	<u>-</u>	_	41   2
144 850 Processed Sample #1	_	1051	_	_	<u>-</u>		<u>-</u> -	_	• -	_	41   2
145 850 Processed Sample #2	_	1021	_	_ _	<u>-</u>		<del>-</del> -	_	<u>-</u>	_	41   2
146 850 Processed Sample #3	_	1051	<del>-</del>	_	_		<del>-</del> -	_	<u>-</u>	_	41   2
147 850 Processed Sample #4	_	1051	<u>-</u>	_	_		<del>-</del> -	_	<u> </u>	-	41   2
148 850 Processed Sample #5	-	1021	<del>-</del>	- -	<u>-</u>		- -	_	- -	_	41   2
		-			- -		-	-		-	-
	- ~	- <	- <	- ư - ư		- 4	- 4	٠,		٦.	- a
	7 6	7 U	r c	) -	ט ר	> 4	> r	٠,	- (	- 0	
	) W	J O	Ω-	۲ ،		ט	۰	-	.7	a	>

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 10 of 38)

		1			1 1 1 1 1 1 1 1 1				
-	3	cla	I WN I NH I S I T I	DATA	DESCRIPTION			111111	
	=	S W	Isolosioixi	1		RE			
INO TO OIL	=	DIA	16.1/61 IP	START	END IDATA	<u> </u>	2 3	<u>.</u>	
	) NECEDITATION I	9	E IE		T	<u>- [교</u>	_	<u>&lt;</u> !	
- ×		911	III QI I	IMD BT   WD   BT   Y	BTIYI	lvixici	II DI	_	
<u> </u>			_	* - *-	I IP I	INICIO	_	11   [	
<u> </u>		<u> </u>	101 /1	· —	<u>=</u>	LIBIE	- -	<u>э</u>   о	
								141121	
11491850!Processed	laed Sample #6	_	1021	 				141121	
1850 Last		_	1021		 	 	 		
	_	_	1021 1 1	_ ·	 				
	Milliseconds of Day	_	1021 1 1	_	·				
850 GMT	Fractional Milliseconds	_	1021 1 1	_ ·		 	 		
8501Last	Command Received Word #0	_	1021 1 1	- -	_	 	 	_	
850 Last		_	1021 1 1	_ - -	_ ·	 			
850 Last		_	1021 1 1	- - -	-	- · - ·	 		
850 Last		_	1021 1 1	_ _		 			
850 PLast	Command Received Word #4	_	1021   1	_ _	_ ·	 			
850 Last	Received Word #	_	1021 1	_ ·			 		
۔ د	Received Word #	_	1021 1 1	_ ·	 				
	Received Word #	_	1021	·	 		 		
850 Last	Received Word #	- -	1021	- ·	 		 		
850 Last	Received Word #	_	1051	_ ·	 	 			. –
850 Last	Command Received Word #10	<u>-</u>	1021	 	 	 			_
850 Last	Command Received Word #11	<u>-</u>	1021	<u>-</u> -	 				
850 Last	Word	_	1021	 	 			_	-
167 850 Last	Word	_	1051	 	 			14112	
850   Last	_	_	1021	 	 			-	_
169 850 Last	Word	_	1051	 	 			14112	_
	Word	_	1021	 	 		 	-	-
1171   850   Last	Command Received Word #17	_	1021	 	 		 	14112	-
172   850   Last	Command Received Word #18	_	1021	<u> </u>	 	 	 	_	_
1173 850 Last	Command Received Word #19	_	1051	- · - ·	<u>-</u> -	 	 	-	_
11741850 Last	Command Received Word #20	_	1021 1	- · - ·	 	 	 	14112	
117518501Last	Received Word #	_	1021	- · - ·	<u>.</u> .	 	 		
117615501Last	Command Received Word #22	_	1051 1 1	_ ·	_ ·	 	 		
1177,850 Last	Received Word #	<u>-</u>	1021 1 1	_ ·	- ·	 		14112	
178   850   Last	Command Received Word #24	<del>-</del>	1021	-	- : - :			- 1	-!
			-		- -	- -	_	_	_
- « - «		- W	4 4 4	4 5 5	5 5	999	1 1 1	_	<b>x</b>
ດ ກຸ ດ ດ	•		3 5 7		2	9	125	æ	0
-									

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 11 of 38)

		WN NWI	HISIT	DATA	DESCRIPTION	I NOW I	-	///////////////////////////////////////	1111	12
NO TO WI	S E	5 .	X O	!	i		_	1	1	-
	V o	16.1/6	<u>a</u> :	ART	- ·	VALUE!	_	CIRCISID	_	T
<del>.</del> -		<u>*</u> :	<u> </u>		-	EE.	_	IOINC	_	Ξ
 	3 in i	<u> </u>	_	WD BT WD BT	_		F	<u> </u>	ď	<u>B</u>
<del>-</del> -	3	<u>s</u>	<u>*</u> ×	<b>=</b> _	<u>- I</u>	$\overline{\circ}$	_	<u>교</u>	_	==
	- K	<u>-</u>		- -	<u>교</u>	TIPLE	_ _	_	<u>Q</u>	<u>=</u>
179 850 Last Command Received Word #2		1021	- -	  -			-	_		101
		1021	_	- -	- - -		 			2 -
850 Last Command Received Word #	1 1 1	1021	- - -	-	. <u>-</u>					
850 Last Command Received Word #	28	1021	- - -	- 	- - -		- - 		4 1	
850 Last Command Received Word (	129   1	1021	- -	_	- - -		 		[ 7	
850   Last Command Received Word	1 1 00	1021	_ _ _	- -	- - -				4	2 -
850 Last Command Received Word #	31	1021	<u>-</u>	<u> </u>	_ _	_	_	· <u>-</u>	141	2
850 Invalid Comman	_	1021	<u>-</u> -	<u> </u>	<u>-</u> -	_	_	_	41	7
850   User Requested Dat	_	105	- - -	- -	<u>-</u> -	_ _ _	<u>-</u>	_	41	7
850 ECS Next Timeline	<u>-</u>	1051	_ _ _	<u>-</u>	_ _ _	_ _ _	_	_	41	_
850 FTS Next Timeline Record	_	105	_	<u> </u>	- -	<u>-</u>	_ _	_	41	_
850 rhs Cold Guard Next Timeline	Rec	105	<u>-</u> -	<u>-</u>	<u> </u>	_ _ _	_	_	41	121
850 FHS Cold Zone Next Timeline	Rec	1051	<u>-</u> -	<u>-</u>	<u>-</u> -	<u>-</u>	_	_	141	-
850 FHS Booster Next T	<u>-</u>	1051	<u>-</u> -	<u>-</u>	<u>-</u>	<u>-</u>	_	_	41	_
850 FHS Hot Zone Next T	_ _ _	1021	<u>-</u>	<u> </u>	<u>-</u>	_	_	_	141	-
FHS Hot Guard Next	lec	1021	<u>-</u> -	<u>-</u>	<u>-</u> -	_ 	_	<b>-</b>	41	-
1850 SIDS Next Timeline Record	<u>-</u>	1021	<u>-</u> -	_	<u>-</u> -	<u>-</u>	_	_	41	-
850 ECS Current Segment Star	_ _ _	1021	_ _ _	_	<u>-</u> -	_ _ _	_	_	141	
850 ECS Current Segment Stop	<u>-</u>	1021	_ _ _	<u>-</u>	<u>-</u> -		_	_	141	7
850 FTS Current Segment Start	_ _ _	1021	_ _ _	<u>-</u>	_ _ _	_	_	_	41	-
850 FTS Current Segment Stop Tim	<u>-</u>	1021	_ _ _	_	_ _	- -	_	_	141	_
850 FHS Cold Guard Cur Seg Start	Tim	1021	<u>-</u>	<u>-</u>	<u>-</u> -	<del>-</del>	_	_	41	5
650   FHS Cold Guard Cur Seg Stop	Time	1021	_ _ _	_	<u>-</u>	_ _ _	<u>-</u>	_	41	_
650   FHS Cold Zone Cur Seg Start	Time	1021	_ _ _	<u> </u>	- -	_ _ _	_	_	41	_
850 FHS Cold Zone Cur Seg Stop		1021	_ _ _	_ _	<u>-</u>	<del>-</del> -	_	_	141	121
850 FHS Booster Cur Seg Start	_ _ _	1021	_ _ _	_	- -	<del>-</del> -	_	_	41	7
850 FHS Booster Cur Seg S	_	1021	_ _ _	_ _	_ _ _	_	_	_	141	7
850 FHS Hot Zone Cur Seg Start	ше —	1021	_	<b>-</b>	_	- - -	- - -		141	2
850 FHS Hot Zone Cur Seg Stop T	_ _	1021	_ _ _	<u>-</u>	_		- -		141	2
208 850 FHS Hot Guard Cur Seg Start T	Time	1021	- -	<del>-</del>	_	- -	- -		41	5
			- -					-	-	-
0 0 0		4	4		- 10			٠,	- r	<b>-</b> a
3 67	0 6	, ku	, L	, <del>,</del>	י ת י ר	יי פ יי		ں ۔	٠ :	<b>D</b>
		י י	0	٠ ٦			7 1	ð	ဆ	0

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 12 of 38)

	1	1			1 0	NOTEGIA	MONIC	///	111111111111111111111111111111111111111	1111	=
	1010	Ξ		DATA	DESCR	101111	- IREOIA	-	! ! ! ! !	1	<del>-</del>
	IM S	lso			END ID	INATA VALUE		_	CIRCISID	_	E
	DIA	•	<u>.</u>	- 1 - 1 - 1	- 1		E E .	_	DITOINO.	_	A A
	<u>9</u> –		1	- <del>1</del>	YITHI			II.	la	_	<u> </u>
	3 n			10			NICIO	_	<u>_</u>	_	<u>.</u>
- <del>-</del> -	17	- S	<u> </u>	<b>:</b>	<u></u>	- <del></del>		<u>-</u> -	_	_	<u>-</u> !
		1	-	1	-	1				41	21
	-	1021	_	_ _	- -	_	- · - ·	 		1 41	2
Cor sed scop		1001	_	_	<u> </u>	_	- -	 - ·		7	
Start		100	 	_	_	_	_	- -	_		1 0
850 SIDS Current Segment	<u> </u>	1701	 	- 	. <del>-</del>		- - -	_ _ _		41	17
8501Expel	_	1701	 	- 	· -	-	- -	_ _ _		141	7
1212   SOUTH FROM TIMENT Main Bus Voltage	_	1701	 	 		. –	- - -	_ _ _	_	41	121
OSOLIERA LOWER	_	1021	 		- 	. –	_	_ _ _	_	41	121
OCOLIEGA HODOR	<u>-</u>	1051	_ ·		 		- - -	_	_	41	12
Taddo waarincal	<u> </u>	1021	- -	<u>-</u> -			- - -	_	_	141	121
850 IFEA ADSOLUCE	<u> </u>	1001	_ _	 	 	· 	 	_	_	41	121
850 IFEA ADSOIGE	_	1021	_ _ _	- ·				. <u>-</u>	_	141	121
850 IFEA LOWEL ALMOSPHETS	_	1021	_ _ _	_	- · - ·		 	. <u>-</u>		41	121
Upper Atmosphere	_	1021	_ _ _	<u>-</u>	_			- - 		141	121
850 IFEA Water Int	. <u>-</u>	1021	<u>-</u>	<u> </u>	_	_	 			141	5
IFEA Water Outlet	- -	1021	<u>-</u> -	- -	_		- · - ·	 		141	-
850 RFM Cold End Shell	 	1021		- -	_	_	- ·	 		141	12
hei		1001	_ _	_	_	_	- -				
850 RFM Water	 	1001	- - -	_	_	_	_	 		1 7 7	
850 Sample 1	 	100	. <u>-</u>	_	_	<u>-</u>	_	 		[ 7 ]	
850 Sample 1	 	1021	 	_	_	_	_	<u> </u>		1 4 7 7	
850 Sample 1	 	1001	- - -	_	_	_	_		·	, , ,	
850 Sample 1 Temp	 	1001	 	_		_	_	<u>-</u> .	 	1 7	
Sample 1	 	1001	. – . –	_	_	- -	_ _	_ ·	<del>-</del> -	[ [ [ [	
-		100	- - -	_	_	<u>-</u>	- -	_ · _ ·	 		
Sample 2 Temp	 	100	. – . –	_	_	_	- -	- ·	 	7. 7	
850 Sample 2	 	200	 	_	_	-	<u> </u>	_	<u> </u>	-	
850 Sample 2 Temp	 	100	- - 		_	_	<u>-</u>		- · - ·		
1234 850 Sample 2 Temp 4	 	100	- - -	_	_	- -	_	_ ·			
850 Sample 2 Temp	 	201	- - -	-	_	_	<u>-</u>	- -	- -	- :	
850 Sample 2 Temp	- · - ·	170	 		_	_	<u>-</u>	- -	- -	- :	
12371850 Sample 3 Temp 1	<u> </u>	1701	 		. –	_	<u>-</u>	_ _ _	<del>-</del>	<del>-</del>	17116
850 Sample 3 Temp	<del>-</del>	1701	- ! !	-    -    -    -	- 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1	1	1 - 1 - 1	 	   -
	-	-	- -	-	_	_	-	<u> </u>		<u>-</u> ر	- a
	- ~		4 4 4	5	5 5	5	9 9		- 0	- α	
	1 <		5 7 8	7		·.	200	-		•	)
3 67	<b>n</b>										

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 13 of 38)

						111111	1		1	
		Σ	SITI	DATA D	DESCRIPTION	NOM	10	111111111111111111111111111111111111111		
INO TO OIL			0 X			IREO IA	¥			
~	V O	5/	Ы	START! END	IDATA	VALUE	_	CIRCIS	TOIS	- E
		_	F E		_	3 3	_	OIIO	0	- <del>-</del>
	3 . i	_ : _ :	_	WDIBTIWDIBT	_	IVIXIC		ITI DI	- :	
	7 2		* :	=	I B I	IN C	_	3   E	_	
	W	- -		- -	E	ITIP	1	_		D E
850 Sample 3 Temp	-					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		-	. !
e 3 Tem		1701	<u> </u>		_	_	_ _	_	_	41   2
3 Temp		120	- · - ·	_	_	<u>-</u>		_	_	41121
m		170	_ ·	_	<u>-</u>	<u>-</u>	_	_	_	41121
4 Temp	 	170		<del>-</del> -	<u>-</u>	_	_	_	_	=
4 Temp		100	- · - ·	<u> </u>	_	<u>-</u>	_	_		41121
850 Sample 4 Tem		100	 	<del>-</del> .	<u> </u>	<u>-</u>	<u> </u>	_	_	41   2
850 Sample 4 Temp		100	 	- · - ·		_	_ _	_	_	41   2
850 Sample 4 Temp		102	 	 	<b>-</b> .	_	- -	_	,_	41121
850 Sample 4		1021	 		 	_	_	_	_	41121
Sample 5 Temp		1021	 	_	<u> </u>	_ _ _	<del>-</del> -	<u> </u>	_	41   2
8501		1021	 	 	<u> </u>	<u> </u>	_	<u> </u>	_	41121
850 Sample 5 Temp		1021	 	<b>-</b> -	 	_	<del>-</del>	<u>-</u>	_	41121
Sample 5		1021		<b></b> 	 		_	<u>-</u>	_	_
850 Sample 5 Temp	-	1021	 	 	<b>-</b> -		_	<u> </u>	Ť	_
Sample 5		1021	 	 	<b>-</b> -		_ ·	<u> </u>	<u> </u>	-
850 Sample 6 Temp	-	1021	 	 			_	_	<u> </u>	_
850 Sample 6	- -	1021	 			· ·		_ ·	Ť	_
850   Sample 6 Temp	- -	1021	 			- · - ·	_	_	<u> </u>	_
850 Sample 6 Temp	-	1021	 	 	<b>-</b> -	_	_	<b>-</b>	<u>-</u>	_
850 Sample 6	·	1021	 	<b>-</b> -		- · - ·	_	_	_	_
850 Sample 6	- -	1021	 	 	 	 	_	_	<u>~</u>	_
850 Stepping Motor	t   -	1021	 	- <del>-</del>		 	<u> </u>		_	
850 Stepping Motor Phase	Je   -	1021	 		 	 	- · - ·		- 7	_
850 Stepping Motor Phase B	)t	1021	 			- ·	<u> </u>	- -	_	_
850 Stepping Motor Phase B	91	1001	 	 	<del>-</del> -	- ·	- -	- -	_	_
850 Furnace Linear Position	- -	1001	 		 	- ·	_	- -	_	41   2
850 FTS Stepping Mo	- <b>-</b>	1201	 	<b>-</b> -	_ ·	_	_	<u> </u>	-	1   2
67 850 Rapid Translation		1701	 	<b>-</b> -	 	<u>-</u> -	<del>-</del>	<u>-</u>	<del>-</del>	41   2
ater Currer		1021	 	 	 	<u>-</u>	- -	_	_	41   2
- 1		1051		<b>-</b>	_	<u>-</u>	_	_	_	41   2
	_	- -	_		-		-	-	! -	-
	3 4	4 4 4	4 5		- 5	- v - v			<b>–</b> r	- (
0	0 6	3 5 7	8	3 5	7	2 6 7		- 0	- 0	ρc

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 14 of 38)

	lclu	Σ	DATA	A DES	DESCRIPTION	   	<del>-</del> -	,,,,,,,,,,,,,,,	////	1///
ENT C N	S E		START	END	IDATA	VALUE     L		CIRCISID	_	_
	9	3.		1	T	. IBIE!	_	Ι	_	_
	10 E		WD   BT	BTIWDIBTIY	١x١	INIXIC	_	TI DI	_	
	17	x  s	_ _	_ <u>=</u>	l <u>a</u> l	<u> </u>	_		_	_
 	<u>×</u>	_	_	<u>-</u>	<u> </u>	ITIPIE	- 1	-   -	-	D E
	-	1021		-	  -  -	-	_	_	-	41   2
850 Cold Guard Rearer Voltage			 		. <u>-</u>		_	_	_	41121
850 Cold Main Primary Hearer	 	100			- 			. <u>-</u>	_	41   2
850 Cold Main Primary Hea	 	100				- <del>-</del>		· -		41121
850 Cold Main Red Heater		1001	 		 	- <del>-</del>			_	_
850   Cold		1021	 		- -	- - -	. –	- -		41   2
Boost Heater	. <u>-</u>	1021	- -	. <u> </u>	<u> </u>	- -	_	<del>-</del>	_	_
18501Hot Guard Heater	_	1021 1 1	_	<u>-</u>	_	- - -	<u> </u>	_	_	_
850 Hot Guard He	_	1021 1.1	_	<u>-</u>	_	_	_	- · - ·		
850 Hot Main Primary	<u>-</u>	1021 1 1	<u>-</u>	_	_	_ :		<u> </u>		
1850 Hot	<u>-</u>	1021 1 1	_	_	_	- ·	<u>-</u> -			
280 850 Hot Main Red Heater Current	<u>-</u>	1021 1 1	_	_	_	·		<b>-</b> -	_	
850 Hot Main Red Heate	_	1021 1	_ ·	<u> </u>	_ ·					41121
	<u> </u>	1021 1	_	_	<u> </u>					17 17
850 Cold Zone CJ Block	_	1021 1	<u>-</u>	- ·				<b>-</b> -		-
J Block	<u>-</u>	1021 1	<u> </u>	<u> </u>	- ·					
850 Hot Zone CJ Block	<u> </u>	1021	- · - ·	<u>-</u> -	 					41121
e 1 CJ Block	_	1021	<u>-</u> -		 					
850 Sample 1 CJ Block	<u> </u>	1021	<del>-</del> -	 	<u>-</u> -			 		
Sample 2 CJ Block	<u> </u>	1021	<u>-</u> -		 					
850 Sample 2 CJ Block	 	1020		 	 					
8501		100		- 		. <u>-</u>	_	_		141121
Block Block	- -	1021	. <u> </u>	. <del>-</del>	- -	_	_	_		141   2
850 Sample 4 CJ Block	_	1021	_	<u>-</u>	_	- -	_	_ _		_
850 Sample 5 CJ Block	_	1021 1 1	<u>-</u>	<u>-</u>	<u>-</u>	_	_	_		
850 Sample 5 CJ Block	<u>-</u>	1021 1 1	<u>-</u>	<u>-</u>	<u> </u>			- · - ·		
850	<u>-</u>	1021   1	_	_	_	_ ·		<u> </u>		
850 Sample 6 CJ Block	_	1021 1 1	<u>-</u>	- -	_	_	_	- · - ·		14112
1298 850 Booster Heater Control Temp 1	- -	1021	<u> </u>	<u>-</u>	-	- 1	- !		1	
	  -	-       	_	_	_	<del>-</del>	_	_	_	_
- 0 0	3.4	4 4 4	4 5	5 5	5	9 9 9	7	۲	ר ר	<b>დ</b> (
3 67	0 6	3 5 7	8 1		7	5 6 7	<b>⊣</b>	7	ς α	<b>&gt;</b>

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 15 of 38)

—		NMISITI	DATA D	DESCRIPTION	IMONICI	,,,,,,,,,,,,,	1/////
ENTIC N	S S S S	015010	FARTI END	IDATA	VALUE !   L.	CIRCISID	। । ।
DESCRIPTION		3	l	- T	E E	DI IOINO.	×
	UE		WDIBTIWDIBTIY	BTIYI	IVIXICI	IT D	<u>a</u>
_	- -	IS IXI	- - -	I B I	INICIOI	13 E	_
=	- E	_	- - -	<u> </u>	TIPIFI	_	_
1299 850 Booster Heater Control Temp 2	-	021	<del>-</del>			- -	41 2
850 Cold Guard Heater Conti	_	021 1 1	<u>-</u>	_	<u>-</u> - -	_ _	141121
850 Cold Guard Heater Control	_	02	<u>-</u> -	<u>-</u>	<u>-</u> - -	<u>-</u> -	41 2
850 Cold Main Prim Htr Cntrl 7	_	021   1	_	<u>-</u>	- - -	- - -	41 2
Main Prim Htr Cntrl 7	<u>-</u>	021 1 1 1	- -	_		_ ·	41 2
850 Cold Main Red Htr Control Temp	<u>~</u> _	021 1 1 1	_	<u>-</u>	_ _ _	_	41   2
850 Cold Main Red Htr Control	_	02	 		<u>-</u> .	<u>-</u> -	41   2
850 Hot Guard Heater Control	<u>-</u> :	021 1 1	- · - ·	 	 - :	<b>-</b> -	
850 Hot Guard Heater Control 1	_ :	021 1 1 1	 		 	 	
850 Hot Main Prim Htr Control Temp	_ :	021	 	<u> </u>	 	 	41121
850   Hot Main Prim Htr Control	_ :	021	- · - ·		 	 	141121
850   Hot Main Red Htr Control		021	 		 	 	
830 Not main Red Att Control Temp		1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
CAM ROCALY		021			  		
850  SEM Track Temp		021 1 1	- - 	· –	- - - -	- - -	4112
850 RTD Mux 1	. <u>-</u>	02	. <u> </u>	- - <b>-</b>			141121
850 RTD Mux 1 Calibration -	<u> </u>	021 1 1	- -	<u>-</u>	- - -	- -	41 2
1317 850 RTD Mux 2 Calibration - High	<u> </u>	02	<u>-</u> -	<u>-</u>	- - -	 -	141121
850 RTD Mux 2 Calibration -	<u> </u>	021 1 1 1	_ _ _	<u>-</u>	<u> </u>	- - -	_
850 RTD Mux 3 Cal	<u> </u>	021 1 1	_ _ _	_ _	_ _ _	_ ·	_
850 RTD Mux 3 Calibration -	_	021   1	_ ·	<u>-</u> -	 	 	41 2
850 RTD Mux 4 Calibration -	_ :	021	<b>-</b> -		 	 	141121
850 RTD Mux 4 Cal		170	<b>-</b> - 	 	 	 	
650   NID MUX 3 CALIDIACION			 			 	
southin max 5 calibration -						 	
SOUNT MUX & CATIBERTION -		170		 		 	
320 830 KID MUX & CALIDIACION = LOW		021 - 1	 		 		
/ SOUNTD MAX / CALLDIAGION		170		 		 	
328 830 KID MUX / CALIDIACION - LOW	-	1 1 1 70	- !	- !	- !	-	<b>→</b> 1
<del>-</del> -	_			<u> </u>	(	— r	- ·
0 0 0	3.4	4 4 4	5 5	. 55	9 9 9	1 1 1	7 8
	0 6	3 5 7 8	1 3	5 7	2 6 7	1 2 5	0 8

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 16 of 38)

		MN I MN	141017	DATA	DESCR	DATA DESCRIPTION	MONIC	101	>	IIIIIIIIIIII	1111	1
_	2 5	N I VISI	2 9			1 1 1 1	REQ   A	I V	-		1	
ENTIC N	V Q		E E	START	END ID	IDATA VALUE		1	<u></u>	CIRCISID	<u> </u>	<u> </u>
NO. O O DESCRIPTION	91 -	3 :	EE	T	T		IN X	- 5	<u> </u>	iri bi		<u>B</u>
	IO E	_ :	_ ?		11010	- <del>-</del>	Z	NCIO	-	<u>ы</u>	_	11
	<u> </u>	2 = 	<u> </u>	<u> </u>	<u>- =</u>		TI	PIF	_	-	_	E
			-		-		- -	     	_	_	41	1121
13291850 RTD Mux 8 Calibration - High	_ ·	1001	 	 			. <u>-</u>	- -	_	_	141	_
Mux 8 Calibration - Low	_	1701					-	_	_	_	41	_
Sroup A Calibration Type	<u> </u>	1201		 	 		- -	_	_	_	141	_
Group A Calibration Type	 	1001	 				_	_	-	_	<del>-</del>	_
Group A Calibration	 	1001	 				_	<u>-</u>	-	_	_	_
850 TC Group B Calibration Type		1021	-	. <del>-</del>	_	_	_	_	_		- :	
850 TC Group B Calibration 17Pe		102	_	_	<u> </u>	_	_	<u> </u>		<b>-</b> -		17117
850 TC Group B Callulation 17FC	. <u>-</u>	1021	_ _ _	<del>-</del>	<u> </u>	_		<u> </u>		 		41121
Group C Calibration Type	_	1021	_ _	_				 				
C Calibration Type	<u>-</u>	1021	_ _	_ ·								41   2
Group D Calibration	<u>-</u>	1021	_	- ·				 		- 	-	41   2
RSOITC Group D Calibration Type	_	1021	_						-	. – . –	-	41   2
850 TC Group D Calibrat	<u> </u>	1021					-	_	. —	<u> </u>	<u> </u>	41   2
850 SMS Board Velocity Reading		70	 	 		_	_	_	-	- -	<u> </u>	_
850 Cold Guard Zone CJ		70					_	_	_	<u> </u>	<u> </u>	41   2
850 Cold Main CJ		70		 				_	_	- -	_	_
850 Booster Zone CJ Block Act 1	<u> </u>	70		- <del>-</del> 				_ _	_	<u>-</u>	_	_
850 Hot Main Zone CJ Block Act T	<u> </u>	70			-	<b>-</b>	_	_	_	- -	_	
850 Hot Guard Zo	 	70	 		-	. –	_	_	_	- -	_	41   2
850 Total Calcul	 	200	 		-		_	-	_	- -	_	_
	<u>-</u> -	200	 		-	. –	-	_	_	- -	_	-
351 850 Unused	 	200	 	. <u>-</u>	_	_	_	_	_	<u> </u>	_	
850 Cold Main Prim Htr Cind	 	102	. <u>-</u>	_	_	_	_	<u> </u>	<u> </u>	_	_	_
•	 	00	. <del>-</del>	- -	_	_	_	_	<del>-</del> -	_		_
354 850 Booster Htr Cmd Current	<u> </u>	201	 			. <u>–</u>	_	_	_	<u> </u>	_	_
850   Unus		70	 	- 		. <u>-</u>	_	_	_	_	_	41   2
850 Hot Main Pr	_ ·	701	<u> </u>	<b>-</b> -		 	-	_	_	_	_	41   2
850   Hot	_	701	 			 	-	_	_	_	_	41   2
	-	701					- 1	•	1	1	1	1
	_	_	_ _	-		_	_	_ '	<del>-</del> '	<b>-</b> (	<u> </u>	— α
	· ω	4	4 4 4	5	5 5	5	9	ه و		<b>-</b> (	- o	0 <
0 0 0	0 6	3	5 7 8			7	2	_	-	7		)
7 9 %												

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 17 of 38)

	Icla	I WN I NM	ISIT	DATA	DES	DATA DESCRIPTION	IMONICI				
INO TO OT	Σ Σ	solosi	101	1	- 1		REQ   A	-			
	<u> </u>	0/1/0	<u>-</u>	RI	END	DATA VALUE	E     L	<u> </u>	CIRCISID	Ξ (	<u>-1</u>
I IN . I DESCRIPTION	<u>5</u>	<u>3</u>	區		I	II.	E EI.	<u>a</u>	IOINO.	_	IAI
<u> </u>	<u>a</u> :	<u> </u>	_	WDIBTIWDIBTIY	DIBT	I.X.I	IVIXICI	T	TI DI	<u>-</u>	18
	<u>.</u>	<u>s</u>	= ×	<del>*</del> _	_	I-B-I	<u></u>	13	ョ	<u> </u>	<u> </u>
	K	<u> </u>	- 101	- -	- -	ᇤ	TIPIF	_	_	<u> </u>	ᆵ
359 850 Unused	_	1021	_	  -	  -	 		i -	-		1 -
1360 850 Cold Guard Zone Setpoint Temp	_	1021	- -	-			 				
e Setpoint	. <u>-</u>	100	 					<del>-</del> -		<del>-</del>	1 7 1
Setpoint To		201	 				_ ·			7	-
•	- 	100	 	 			- · - ·	_ :		-41	_
e Setpoint	- -	1021	 				 	 		41	
365 850 Cold Guard Htr Calc Temp 1	. <u>-</u>	1021	- - - -				 				
uard Htr Calc Temp	_	1021	- - -								
	- -	1021	 	 			 			16	
368 850 Unused		102	 				 			41	
136918501Cold Main Prim Htr Calc Temp 1	 	20	 				 			4	_
m Htr Calc		200	 				 	<u> </u>		41	_
Htr	 	1021	 				 			41	-
1		100	 				 	<u> </u>		- 4	
		200	<b>-</b> -	 		<b>-</b> -	- · - ·	<u> </u>	_	4	_
	 	100	 				_ ·		_	4]	_
		201	 	 			 	<u> </u>	_	<del>-</del>	_
1376185010nused	 	7 0	 				_	_	_	4]	_
377 850 Hot Main Prim Htr Calc Temp 1		1001	 	<b>-</b> -	 			- ·	_	=	-
Main Prim Htr Calc		200	 				_ ·	_	_	41	_
Main Red Htr Calc Temp 1		120	 					<u>-</u>	_	4	_
Main Red Htr Calc		700	 					_	_	41	_
Guard Htr Calc Temp 1		100	 				  	_	_	41	_
Guard Htr Calc		1021	 	 			- : - : - :	- ·	<del>-</del> .	41	_
sed		1001	 	 			- · - ·	- ·	_	41	_
384   850   Unused		1001		 			  	_ ·		41	
1385/850/Cold Guard Zone Act Temp		30	 				- · - ·	_	_	4]	5
138618501Cold Main Zone Act Tomo		7 6	<u> </u>	- ·	- · - ·	_	- -	_	_	-41	_
1387185018coster 7cos act Tomo		1701	- : - :		_	_	- - -	<u>-</u>	_	41	_
osolposcer cone A	_	1021	_ _	_ _	<u> </u>	_	<u>-</u> -	_		41	121
308  63U HOT Main Zone Act Temp	_	1021	- -	<del>-</del>	_	_		_	_	41	_
		-	-	<u> </u>	-				-		-
0 0 0	3.4	4	4	5 5	. ري		- v		- ~		_ a
3 6 7	0 6	3	7 8	1 3	S		) (c)		- ແ	~ a	0 0
				1	,			,	7	0	>

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 18 of 38)

	1 1 1 1 1 1	11111	1 1 1 1	1 1 1 1	1	i !							
	010	MNINM	HISIT	_	DATA	ESCI	DESCRIPTION	WON   C	<u></u>	<u>`</u>			_
		01081		-	1	1		-   REQ	A I	<u> </u>		1	<u>-</u>
ENTIC NI	VIQ.		41 15/	START		END	DATA VALUE	_	IT	<u></u>	CIRCISID	<u>ы</u> :	Ξ
DESCRIPTION DESCRIPTION	<u>9</u>	<u>×</u>	_			<u>-</u> ;		<u> </u>	- ;	<u> </u>	DI TOTLO		<u> </u>
_	IUIE	<u>a</u>		QM.	WDIBTIWDIBTIX	BIL		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1 2	5 6		1 -
	<u> </u>	<u>-</u>	_	- · •	<b>*</b>		- G	2 6	5 6	= =	<u> </u>	: =	<u> </u>
	<u>ж</u> -	<u>-</u>	<u></u>	·	-	-	교  -  -  -  -	-		-	- !	-	-
		1001	     	-	_		_	_	_	_	_	41	121
1389 850 Hot Guard Zone Act Temp	<u> </u>	700	 	 		- 			_	_	_	41	121
390 850 Cold Guard Zone Delta Temp		70	 			 		- -	- -	_	_	41	121
ne Delt	<u> </u>	1701	 					. <del>-</del>	. <u>-</u>	_	. <b>–</b>	41	121
Delta T	<u> </u>	1001	 						- -	_	_	41	121
393 850 Hot Main Zone Delta Temp	 	200	 					-	- -	_	_	41	15
394 850 Hot Guard Zone Delta Temp		201						_	. <u> </u>	_	_	41	_
1395 850 Cold Guard Zone Uncpid Power		70	 				. –	_	<u> </u>	_	_	141	121
_	<u>-</u> -	700						_	_	_	_	41	121
850 Booster Zone Uncpld F		700				_		_	_	_	_	4]	12
		700		 			<b></b>	-	- -	_	_	41	121
399 850 Hot Guard Zone Uncpld Power	<u> </u>	1701		- <i>-</i>			<b>-</b> -		· -	_	_	141	_
850 Cold Guard Zo	_	170	-							-		41	-
401 850 Cold Main Zone Prop Power	_	1021									. <b>-</b>	41	_
402 850 Booster Zone Prop Power	_	1021								-	. <b>-</b>	141	-
en Cr	_	1021	<u>-</u> :		<b>-</b> -			-		-	. <b>-</b>	141	-
e Prop	<u> </u>	1021						-			. <u>-</u> -	41	_
850 Cold Guard Zone Int	<u> </u>	1021					<b>-</b> -				. <i></i>	41	_
406 850 Cold Main Zone Int Power	<u> </u>	1071	<u>-</u> -		<u>-</u> -				-	-		.   41	_
407  850  Booster Zone Int Power	<u>-</u> -	100			<u> </u>			_	- - -	-	. <del>-</del>	41	_
408 850 Hot Main Zone Int Power	_	1021							- <del>-</del>	-	. <u>-</u>	41	1121
409 850 Hot Guard Zone Int Power	<u> </u>	1701							· -	-	. <del>-</del>	41	1   2
410 850 Cold Guard Zone Power		70						-	- -	- -	_	-	41   2
411  850 Cold Main Zone Power	<u>-</u> -	1701			<b>-</b> -			-	 	- -	_	-	41   2
412 850 Booster Zone Power	<u> </u>	170							 	. <del>-</del>	. <u>-</u>	-	41   2
	<u>-</u> :	1001			<u>-</u> -				· -	. <b>-</b>	· -	-	41   2
Power	_ ·	1021							- - -	· -	· –	-	41121
415 850 Cold Guard Htr Calc Voltage	_	1001		<b></b> .					- - -	 	· -	-	41   2
	<u>-</u>	102		<u> </u>	<u>-</u> -					- 	. <i>-</i>	-	-
1417, 550 Cold Main Prim Htr Calc Voltage	<u>-</u>	1021	_	<u> </u>	<u> </u>					 		-	-
418   850   Cold Main Red Htr Calc Voltage	<u>-</u> -	1021	-	- ¦	-	- }		-	-	- <u> </u>	-	- 1	- 1
	-	-	_	_	_	-	_	_	_	_		- (	<u> </u>
_ <	. 6	4	4	4	5 5	9	2	9	9	7		-	x ·
		~	5 7	80			7	5 6	7	-	2	ဆ	)
3 6 7		י		١									

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 19 of 38)

	Icla	SIMNINMI	ILSIT!	DATA	DATA DESCRIPTION	TION	MONIC		///////////////////////////////////////	////	
ENTIC	X X	180   08	101	1			REGIA	<u>-</u>		!	
6	V C	9/1.9	<u>a</u> !	TART	END   DATA	A VALUE	_	_	CIRCISID	_	I I
IR . I DESCRIPTION	<u>.</u>	<u>*</u>	ш	-	L		EE.	_	Ξ	<u>×</u>	<u>×</u>
<u>×</u> -	10 E	<u>-</u>	_	WD BT WD BT Y	BTIY		IVIXIC	_ 	<u> </u>	<u>a l</u>	_
_ · - ·	<u>=</u>	<u>s</u>	<del>-</del> ×	<del>-</del>	- FP		OIDIN	_	_	<del>-</del>	<u></u>
	- X	<u>-</u>	<u>-    </u>	-	<u>교</u>		TPF	<u>-</u>	<del>-</del>	<u>a</u>	<u> </u>
419 850 Booster Htr Calc Voltage	-	1021	_ _	  -	  -  -			- - -	! -	4-	41121
420  850  Unused	_	1021	· –	- -	. <u>-</u>	٠	 				
421 850 Hot Main Prim Htr Calc Voltage	- -	1021	 		 		 	 			
Htr (	·	1021	- - -		 						
423 850 Hot Guard Htr Calc Voltage	_	1021	- - - -		- <del>-</del>		 				
	_	1021	- - -		- - -		 				
425 850 Cold Guard Htr Act Current	_	1021	- -	_	- -		- - -				
	_	1021	_ _ _	_	_ _ _		- - -	· -	-		
850 Cold Main Prim Htr Act	<del>-</del>	1021	_ _	<u> </u>	_ _ _		_	_	- -	-	-
850   Cold Main Red	_	1021	_ _ _	<u> </u>	<u>-</u>		_	_	_	-	41121
429 850 Booster Htr Act Current	_	1021	_ _	_	 			_	_	-	41121
430 850 Unused	_	1021	<u>-</u>	_	<u>-</u>		_	_	-	-	-
850 Hot Main Prim Htr Act	_	1021	<u>-</u>	_ _	_		_ _	_	_	-	1121
850 Hot Main Red Htr A	_	1021	<u>-</u>	<u>-</u>	_ _ _		_ _	_	_	_	41121
433 850 Hot Guard Htr Act Current	_	1021	_ _ _	<u>-</u>	_ _ _		_	_	<u> </u>	-	41   2
850 Unused	_	1021	<del>-</del>	<u>-</u>	_ _ _		_	_	_	_	41   2
435 850 Cold Guard Htr Calc Resistance	_	1021	<u>-</u> -	<del>-</del>	_ _ _		<u>-</u>	_	_	-	41   2
850 Unused	_	1021	<u>-</u>	- -	<u>-</u> -		<u>-</u>	_	_	41	_
850 ColdMain Prim Htr Calc	_ _	1021	<u>-</u>	<u>-</u>	_ _ _		<u>-</u>	_	_	41	1121
438 850 ColdMain Red Htr Calc Resistance	_	1021	_ _ _	<u>-</u>	<u>-</u> -		<u>-</u>	_	_	-	41   2
439 850 Booster Htr Resistance	<u>-</u>	1021	- -	_	- -		_	_	_	4	41121
850 Unused	_	1021	<u>-</u>	<u> </u>	- -		_	<u> </u>	_	141	1 2
850 HOTMain Prim Htr Calc	_	1021	_ _ _	<u>-</u>	_ - -		<u>-</u>	<u>-</u>	_	141	1   2
850 Hot Main Red Htr Ca	<u>-</u>	102	<u>-</u> -	- -	_ -		<u>-</u>	_	_	41	_
443 850 Hot Guard Htr Calc Resistance	_	1021	_ _ _	- -	- -		_	_	_	41	_
850 Unused	_	1021	_ _ _	_ _	_ _ _		_	_	_	141	_
445  850  Cold Guard Htr Limited Power	_	1021	_ _ _	_	_ _ _		_	- -	· _	141	-
446   850   Unused	<u> </u>	1021	_ 	_	_		_	-	-	141	-
	_	1021	_ _ _	- -	- - -		. <u> </u>	· –	. <u> </u>	141	
448 850 Cold Main Red Htr Limited Power	_	1021	- -	_	_	_	- -	· –	- 	41	
	-	-	-			-	-		-	-	· ! -
	- ~	- <	- <			- (	- ·	- r	- (	<b>-</b> 1	- (
, c		r (	r (	n •	O 1	، ۵	: ع • و	-	_	_	ဆ
		s o	<b>x</b>			S	6 7	1 2	2	ထ	0

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 20 of 38)

	ICIO	TISIMNINMI	ISITI	DATA	DESCRIPTION	-	MONICI	////	111111111111111111111111111111111111111	1////
Z C FXG	S W	Isolosi	0	1 1 1	111111		REGIAI		1	í
10 01 0N	PIDI	16.1/6	<u>-</u>	START! E	END   DATA	VALUE	<u> </u>	clacisid	SID	_
DESCRIPTION	9	<u>3</u>	-   <u>3</u>   <u>4</u>		T	<u>—</u>	<u> </u>	<u> </u>	Š.	_
<del>-</del> -	3 n	<u>_</u>	MIII	WDIBTIMDIBTIY	BTIY	=	VIXICI	T D		P B
	1	S	#- - - - - -	<del>-</del>	lal l	=	Ü	_	_	_
 	X		101	<u> </u>	<u> </u>	=	TIPIE	_ _ _	_	[필] [미]
	-	1001				-		-	_	141121
449 850 Booster Htr Limited Fower	 	700	 	 			 - 			141121
	_	170	- ·	- ·	<u>-</u> -					
451 850 Hot Main Prim Htr Limited Power	_ _	1021	_	- ·	 	-	 			
452 850 Hot Main Red Htr Limited Power	_	1021	- - -	_	_	_ ,	_ : _ : _ :	_ :		-
453 850 Hot Guard Htr Limited Power	<u>-</u>	1021	_ _ _	_	 		_ :			171161
1454   850   Unused	_	1051	_ _ _	_	_ -	-	<u> </u>	<u> </u>		
455 850 Cold Guard Htr Des Current	<u>-</u>	102	- - -	_	_		- · - ·			171161
456  850  Unused	_	1021	_ _ _	<u> </u>			<u> </u>	<u> </u>		
457 850 Cold Main Prim Htr Des Current	_	1051	_ _ _	<u>-</u>	_	_ ·	 	<u> </u>		
	<u>-</u>	1021	_ _ _	<del>-</del>	_ _ _		<u>-</u> :			
459 850 Booster Htr Des Current	<u> </u>	1021	_ _ _	_	_ ·	•	 	<u> </u>		
460 850 Unused	<u> </u>	1021	_ _ _	- -	 		_ : _ :	<u> </u>		
	_	1021	<u> </u>	_	_ _ _	_	- · - ·			
462 850 Hot Main Red Htr Des Gurrent	<u>-</u>	1051	- - -	<u> </u>	_ - -		·	_ ·		
463 850 Hot Guard Htr Des Current	_	1021	_ _ _	_ _	_		<u> </u>	 		7116
464   850   Unused	<u> </u>	1051	<u>-</u> -	_	 		<u>-</u> -	 		
465 850 Cold Guard Zone Saturation Flag	6	1021	_ _ _	_	_ ·		- ·			141141
466 850 Cold Main Zone Saturation Flag	<u> </u>	1021	_ _	<u> </u>	_ ·		<u> </u>	<u> </u>		14114
467 850 Booster Zone Saturation Flag	<u>-</u>	1021	_ _ _	<u> </u>	 		 	<u> </u>		
one Saturation F	<u>-</u>	021	_ ·	_ ·	- ·		 			
469 850 Hot Guard Zone Saturation Flag	<u>-</u>	1051	_ ·	_ ·	  		 		<u>-</u> -	
	<u> </u>	105	_ :	<u> </u>			 			
471 850 Fault Sum Delta Power	- -	102	_ ·	_ ·	- · - ·	-	 	 		
472 850 Fault Integral Gain	<u>-</u>	102	- -	_	 	_	<b>-</b> :	 		
473 850 Fault Proportional Gain	_	1021	_ _ _	- -	_ - -		- - -	_ ·		
474   850   Fault Intermediate Calc. Value		1021	_ _ _	<del>-</del>	<u>-</u> -	-	_ _ _	<u> </u>		
850 Fault	21 1	1021	_ _ _	<u> </u>	<u>-</u> -	_	<u>-</u>	<u> </u>		
850 Fault Delta Power - Previ	<del>-</del>	1021	- - -	<u> </u>	- - -	_	_ _	_	_	
Delta	ns	1021	_ _ _	- -	<u>-</u> -	_	_ _ _	<u>-</u> .		
850 Faulted Zone	<u>-</u>	1021	<u>-</u> -	<del>-</del>	- - -	_	<u> </u>	- -	_	121181
	-	-	-		- -	_	-    -	- -	_	_
- c	- W	. 4	4	2		9	9 9	11		7 8
	, 0	. ~		-	5	S	1 9	1 2	2	0 8
3 6 7		, 1	> -	) -		<b>)</b>		1		

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 21 of 38)

111111111111111111111111111111111111111	CIU	MNINM	ISIT!	DATA DE	DESCRIPTION	N MONIC	-	///////////////////////////////////////	////	
ENTIC N	S W	Solosi	X   O		1 1 1 1 1 1 1	REQ   A	<u>-</u>	1 1 1 1	-	
0	DIA	16.1/61	P START	ART! END	DATA	VALUE     L	_	CHRCISID	D   E	II
R .   DESCRIPTION	<u>9</u>		ы		T	EE.	_	H	_	A
- B -	IUE	<u> </u>	_	INDIBTINDIBTIY	3T   Y	IVIXIC	_	T D	<u>4</u>	B
- ·	11		* ×	- - -	<u>P</u>	INICIO	_	2  E	<u> </u>	<u>-</u>
	ΙΚ	_	- Ha	- -	<u> </u>	TIPE	_	_	<u>α</u>	<u> </u>
479 850 Integral Gain Array 1	-	1021	- -	- - - -	-	- - -	i <b>-</b>	- - - - -	   41	1   2
850 Integral Gain	_	1021	_	_	_	<u>-</u>	_	_	41	1   2
Gain	_	1021	_	_	_	_	_	_	41	1   2
850 Integral Gain	_	1021	<u> </u>	_ _	_	<u>-</u>	_	_	141	1   2
483 850 Integral Gain Array 5	_	1021	_	<del>-</del> -	<u>-</u>	<u>-</u> -	_	<u>-</u>	41	1121
	_	1021	<u>-</u>	<del>-</del> -	<u>-</u>	<u>-</u> -	_	_	41	_
Gain	_	1021	<u>-</u>	<u> </u>	_	<u>-</u> -	_	<u>-</u>	41	_
850 Proportional Gain	_	1021	_	<u> </u>	<u>-</u>	- - -	<u>-</u>	<del>-</del>	141	_
850 Proportional Gain	_	1021	_	- - -	<u>-</u>	_ _ _	<u>-</u>	_	41	-
oportional Gain	<u> </u>	102	<u>-</u>	- -	- -	<u>-</u> -	_	_ _	_	_
850 FF Ampoule Align	_	1021	_	_	<u>-</u>	<u>-</u>	<u>-</u>	_	41	_
FF Ampoule Align Exte	_	1021	_	- -	<u>-</u>	<u>-</u>	- -	<u> </u>	41	_
850 FF Ampoule Align Mtr RCCB	_	1051	<u>-</u>	_	<u>-</u>	<u>-</u> - -	_	_ _	41	_
850 FF Ampoule Align Mtr F	_	1021	<u>-</u>		<u>-</u>	<u>-</u> -	_	_	41	_
850 FF Car Trk Extr Right	_	1021	_	- -	<u>-</u>	- - -	- -	<u> </u>	41	_
850 FF Car Trk Extr Right	<u>-</u>	1021	<u>-</u>	- -	<u>-</u>	<u>-</u> -	_	<u> </u>	141	_
850 FF Car Trk Extr Left	_	1021	<u>-</u>	- -	_	<u>-</u> -	_	_	141	_
850 FF Car Trk Extr Le	_	1021	<u>-</u>	- -	<u>-</u>	_ 	- -	_ _	41	_
850 FF Car Spacer Plt	_	1021	<u>-</u>	- -	<u>-</u>	- -	- -	<u> </u>	41	_
850   FF	_	1051	<u>-</u>	<u>-</u> -	<u>-</u>	<u>-</u> -	<u> </u>	<u> </u>	41	_
850 FF Indexing Cam	_	1021	_	<u> </u>	<u>-</u>	<u>-</u> -	<u> </u>	_	41	_
850 FF Indexing Car	_	1021	<u>-</u>	- -	<u>-</u>	<u>-</u> -	- -	_ _	41	_
850 FF Ampoule N	_	1021	<u> </u>	- -	<u>-</u>	<u>-</u> -	- -	<u>-</u>	141	
Ampoule Processi	_	1021	<u> </u>	- -	<u>-</u>	_ _ _	- -	<u>-</u>	41	_
	_	1021	<u> </u>	_ _ _	_	<del>-</del>	- -	<u>-</u>	41	_
SEM Index Motor RCCB	_	1021	<u>-</u>	- - -	<del>-</del>	<del>-</del> -	- -	<u> </u>	41	_
FF Fail Safe Brake	_	1021	<u> </u>	- - -	<u>-</u>	<del>-</del>	_	<u> </u>	141	_
506 850 FF Fail Safe Brake RCCB On	_	1021	<u>-</u>	- - -	<del>-</del>	<del>-</del>	_	_ _	41	1121
507 850 FF Core Hold Down Not Retracted	_	1021	<u>-</u>	_ _ _	<del>-</del>	<del>-</del>	_	_	41	1   2
508 850 FF Core Hold Down Retracted	_	1021	<u>-</u>	- - -	<del>-</del>	<del>-</del> -	_	_	41	1   2
	-	-		-			     		:   -	-
	- 7				- ur	. 4	۲		٠ ر	- α
<b>.</b>	_	_		י ר	ין ר		. ,-	- u	- α	0 0
٥		r O	œ -		_	1 0 0	<b>-</b>		D	>

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 22 of 38)

ELBATI	000000000000000000000000000000000000000	>
C RC SID  E  T D IO NO.  X  A T  D   P  B ?  E   I  L	4411 4411 4411 4411 4411 4411 4411 441	
		n
///		Ç.
C RC SID C RC SID D IO NO. T  D		
CIR DII		2
2-0012-		7
NO C E A C	-9	7
MONIC REGIA IL EIEI- VIXIC		9
		2
i i ii		
DESCRIPTION   END   DATA VALUE     T      D BT Y      P		
LT C		
E E E		7
ESC D 1 D 1 BT 1		2
BO BO		_
		(1)
DATA RT! B	- n	7
START   ND   BT   WD   BT   W		
		8
IST IST IST IST IST IST IST IST IST IST		7
MN NM S SO OS OS OS OS OS OS OS OS OS OS OS OS O		2
MNINMI SOLOSI G. L/GI W I	002  002  002  002  002  002  002  002	<u> </u>
	10220102201022010220102201022010220102	` '
	-4	0
CIU MIS DIA IG		Φ
222_22	d ff	
!		
	Not Extended Extended RCCB Off RCCB On  I Not Retracted I Not Secure I Secure I Secure I Secure I MLT RCCB On  Not Retracted CB Off Ay On  On Not Home On Home vi Not Exceeded ve RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off LLC RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off tch RCCB Off	
i	d Down Not Extended Motor RCCB Off Motor RCCB Off Support Retracted Support Not Secure Support Not Secure Support Secure Support Secure Spt Plt Mtr RCCB Align Not Retracted ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off ity RCCB Off or Drive RCCB Off ation Mtr RCCB Off ation Glutch RCCB ation Glutch RCCB ation Clutch RCCB	
1	1 Down Not Exted to to be a support RCCB Off fotor RCCB On Support Retract Support Not Secure Support Not Secure Support Not Secure Support Secure Support Secure Spt Plt Mtr RCC Spt Plt Mtr RCC Spt Plt Mtr RCC Spt Plt Mtr RCCB Off ity RCCB On us Relay On the Retracted ity RCCB On us Relay On the Position Not Hoposition Not Hoposition Not Hoposition Not Hoposition Not Hoposition Not Hoposition Mtr RCCB or Drive RCCB Or Drive RCCB or Clutch RCCB ation Mtr RCCB ation Clutch RCCB ation Clutch RCCB ation Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror Clutch Retror C	
z		
SCRIPTION	Core Hold Down Not Core Hold Down Externate HD Motor RCCB Core HD Motor RCCB Core HD Motor RCCB Suppoule Support Not Ampoule Support Not Ampoule Support Sermonale Spt Plt Mt Ampoule Spt Plt Mt Ampoule Align Not Ampoule Align Not Ampoule Align Not System Bus Relay O System Bus Relay O System Bus Relay O System Bus Relay O System Bus Relay O System Bus Relay O Step Motor Drive R Step Motor Drive R Step Motor Clutch Rapid Xlation Mt Rapid Xlation Mt Rapid Xlation Clutch Rapid Xlation Clutch Water Inlet Valve Water Inlet Valve	
di	d Down he do Down he wotor RC Support Support Support Support Support Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt Spt Plt	
SC	Id Down Motor Support Support Support Support Support Support Support Spt Platin Align Align Align Align Align Posit treme T treme T treme T to Dr tor Clation Ilation	
ä		
	Core Hold Core Hold Core Hold Core Hold Core Hold Core Hold Core Hold Core Hold Core Hold Ampoule Ampoule Ampoule Ampoule Ampoule PCS Util PCS Util PCS Util PCS Util Furnace Furnace Furnace Furnace Furnace Furnace Furnace Furnace Furnace Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI Rapid XI	
	Core Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Horore Furnac Furnac Furnac Furnac Furnac Furnac Furnac Furnac Furnac Kapid Step Moster Mater Water Water Mater Mater	
	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	_
- <u>z</u>		9
ENT C NO. 10	000000000000000000000000000000000000000	· m
NG	1	

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 23 of 38)

	Iclu	Σ	_	DATA DE	DESCRIPTION	MONICI	MINIMINION STATES	1111111
<u>ပ</u>	S W	01501						
10	<u> </u>	<u></u> =	P STA  F	START END	DATA VALUE		ICLEC SID	2 ×
IR .	<u>3</u>		<u> </u>	WDIBTIWDIBTIY	TIXI		T DI	<u>a</u>
 		_	*	=	<u> </u>	NICIOI	2   E	=
	X		. <del>-</del>	- -	<u>E</u>	TIPIFI	_	ID IEI
	- -	1021		  -  -			  -  -	141121
Vacuum Vent Valve	_	1021 1 1	_	<u> </u>	_	- - -	- -	141121
541 850 FF Vacuum Vent Vlv RCCB Off	_	1021 1 1	_	_	<u>-</u>	- - -	- -	141121
850 FF	_	1021 1 1	_	<u>-</u>	<u>-</u>	- - -	- - -	141121
543 850 FF IFEA ABS Press 2 RCCB Off	_	1021 1 1	_	<u>-</u>	- -	<u>-</u> - -	_ _	141121
850 FF IFEA ABS Press 2 RCCB	_	1021 1	_	_	_	_ :	_ ·	41   2
850 FF IFEA ABS Press 1 RCCB	_	1021	_	_	_	_ ·	- · - ·	41   2
850 FF IFEA ABS Press 1	<u>-</u>	1021 1 1	_	_	_	- -	_ ·	41   2
850 FF Argon Fill Valve	<u>-</u>	1021	_	<u> </u>	<del></del> -	_ ·	_ ·	141121
850 FF Argon Fill Valve Open	<u>-</u>	1021	_	_		_ ·	_ ·	141   2
850 FF Argon Fill Valve RCCB	_	1021	_	<u> </u>	<u> </u>	_ ·	- · - ·	141121
850 FF Argon Fill Valve RCC	<u>-</u>	1021 1 1	_	<u> </u>	_		_	_ ·
850 FF SEM Indexing Jog CW S	_	1021 1	_	_	_	_ :	 	41 2
850 FF SEM Indexing Jog CCW	<u>-</u>	1021   1	_	<u>-</u>	_	_ ·	_ ·	141121
850 FF Ampoule 5 Failure 2	<u>-</u>	1021	_	_	_	_ ·	_ ·	_;
850 FF Ampoule 5 Failure 1	<u>-</u>	1021	_	_	_	_ ·	·	
850 FF Ampoule 4 Failure 2	<u>-</u>	1021	_	<u> </u>		_ ·		41 2
850 FF Ampoule 4 Failure 1	<u>-</u>	1021		<u> </u>	_ ·	_ ·		
850 FF Ampoule 3 Failure 2	<u>-</u>	1021 1	_	_		_ ·		_
850 FF Ampoule 3 Failure 1	_	1021	_	_	_	_ ·	_ ·	
850 FF Ampoule 2 Failure 2	_	1051	_	<u> </u>		_ ·	- ·	
850 FF Ampoule 2 Failure 1	_ :	1021				 	 	4112
850 FF Ampoule   Failure 2		1701				  		
850 FF Ampoule 1 Fallure 1	<u> </u>	120				 	 	
850 FF Water Outlet Valve	<u>-</u> -	1021				 	 	
850 FF Water Outlet Valve Nor		170		 		 		
850 FF Water Outlet VIv RCCB	_	1 1201		<u> </u>	_ :	- · - ·	 	
850 FF Water Outlet Vlv R	_	1021	_	_	_ ·	· ·	- · - ·	
67 850 FF Water Inlet Valve	<u>-</u>	1021	_	_	_	- ·	_ ·	41 2
568 850 FF Water Inlet Valve Normal	<u>-</u>	1021	_	<b>-</b>		_ _ _ _	-	41 2
.	- -		_	  -	_	_ 	_ 	
000	. E	4 4	4		5	999	1 1 1	7 8
3 67	0 6	3 5 7	8	Э	5 7	5 6 7	12 5	8 0

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 24 of 38)

CIU   INN NN STT  DATA DESCRIPTION   HON C    IN	CIRCISID   E   T   DIJONO.   X   A   T   D     P   B   ?   E
CIU   MN   MN   ST   DATA DESCRIPTION   MON	/ / / / / / / / / / / / / / / / / / /
C U   MN NM   S T   DATA DESCRIPTION     C U   MN NM   S T   DATA DESCRIPTION     C U   MN NM   S T   DATA DESCRIPTION     C C	MON       REQ     LUE       V   X     N   C
C U	IPTI ATA
FF Mech Pulsing Mod RCCB Off FF Mech Pulsing Mod RCCB On FF Cartridge 6 Failure 2 Status	SITH O   Y   F   E
FF Mech Pulsing Mod RCCB Off FF Cartridge 6 Failure 2 Status FF Cartridge 5 Failure 2 Status FF Cartridge 5 Failure 2 Status FF Cartridge 4 Failure 1 Status FF Cartridge 4 Failure 1 Status FF Cartridge 4 Failure 2 Status FF Cartridge 4 Failure 2 Status FF Cartridge 5 Failure 2 Status FF Cartridge 2 Failure 2 Status FF Cartridge 2 Failure 2 Status FF Cartridge 2 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Cartridge 1 Failure 2 Status FF Poltier Conn Recended FF Peltier Conn Extended FF Peltier Conn Extended FF Peltier Conn Motor RCCB Off FF Peltier Conn Motor RCCB Off FF Peltier Conn Motor RCCB On	
FF Mech Pulsing Mod RCCB of Eartridge 6 Failure 2 FF Cartridge 5 Failure 1 FF Cartridge 5 Failure 1 FF Cartridge 5 Failure 1 FF Cartridge 4 Failure 1 FF Cartridge 3 Failure 2 FF Cartridge 3 Failure 2 FF Cartridge 2 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF Cartridge 1 Failure 2 FF FF Hot Boost Mod A RCCB 0 FF Cald Main Red Mod RCCB 0 FF Cold Main Prim Mod RCCB 0 FF FF Peltier Conn Retracted FF FF Peltier Conn Extended FF FF Peltier Conn Extended FFF Peltier Conn Extended	I C C C C C C C C C C C C C C C C C C C
FF Mech Pu FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid FF Cartrid	DESCRIPTION
R C C N C O O C O O C O O C O O C O O C O O C O O C O O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C	

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 25 of 38)

1	c l u	Σ	DATA	A DESC	DESCRIPTION	IMONICI	/////	111111111111111111111111111111111111111	: = :
ENTIC N	<u>Σ</u>	olsol				I KEO	1 1 1		1
lo	<u> </u>	()	START	END	DATA VALUE	_	CIRCISID	<u>교</u>	_ ;
R .   DESCRIPTION					T.	<u> </u>	lorial	×	Ā
	OE		WD   BT   WD   BT		<u>.</u>	$\overline{\times}$	17 D	<u>~</u>	B
_ _ _	<u> </u>		_ _	_ _	<u>_</u>	<u>ပ</u>	2   E	_ 	<u> </u>
	×		- - -	_	<u></u>	TIPIF	- - -	<u>a</u>	<u>ш</u>
159918501FF Peltier Pulsing Drv RCCB Off	     	1021			: : : : : : : : :			141	- 2
18501FF Peltier Pulsing Dry RCCB	· –	1021	· _	-		- <del>-</del>	- - -	1411	7
RSOIFF SCS Airflow 1 Status	. <u></u>	1001		-	. –	- - - -	· -	1411	
8501FF PDS Airflow 1	- -	1021		-		- <del>-</del>		141	
850 FF PCS Airflow 2	- - -	1021	- - -			 	-		7
850 FF PCS Airflow 1	. <u>-</u>	1021	· _	- -	. <b>–</b>	- - - -	- - -	_	7
FF Hot Main	_	1021	_	_	_	_ _ _	_	41	7
606 850 FF Hot Main Red Mod B RCCB On	_	1021 1 1	_	_	_	- - -	- - -	41	7
FF Hot Main Red Mod A	_	1051 1 1	_	<del>-</del>	_	<u>-</u> - -	<u> </u>	41	7
850 FF Hot Main Red Mod A RCCB (	_	1051 1 1	_ _	<del>-</del> -		<u>-</u> -	- - -	41	7
850 FF Hot Main Prim Mod B RCCB	_	1021 1 1	_ _	<u>-</u> -	_	- - -	- -	41	7
Hot Main Prim Mod E	_	1021 1 1	_ _ _	<u>-</u>	_	- - -	<u> </u>	41	7
850 FF HotMain Prim Mod A RCCB	_	1021 1 1	_	_	_	- - -	<u>-</u> -	41	7
850 FF HotMain Prim Mod	_	1021 1 1	_	<u>-</u>	_	- - -	<u>-</u> -	41	7
613 850 FF Hot Guard Module RCCB Off	_	1021 1 1	_	_	_	_ _ _	<u>-</u>	41	7
FF Hot Guard Module RCCB	<u>-</u>	1021 1 1	_ _	<del>-</del> -	_	- - -	<del>-</del> -	41	7
FF Hot Boost Mod B	_	1051 1 1	_		_	- - -	<del>-</del> -	41	7
850 FF Hot Boost Mod B RCCB (	_	1051 1 1	_	_	_	- - -	- - -	41	7
850 FF Hot Main Prim Htr Ctl	<u>-</u>	1021 1 1	_ _	- - -	-	<u> </u>	<del>-</del> -	41	7
FF Cold Main Red Htr Ctl 7	_	1021 1 1	_ _	<u>-</u>	_	- - -	- -	41	7
850 FF TC Group A Calibration	_	1021 1 1	_	_	_	- - -	<u>-</u> -	41	7
850 FF TC Group A Calibration Type	_	1051 1 1	_	<u>-</u>	_	_ _ _	<u>-</u> -	41	7
850 FF TC Group A Calibration	_	1021 1 1	_ _	<u>-</u>	_	<u>-</u> - -	<u>-</u> -	41	2
850 FF Cold Guard Heater Ctl 1	_	1021 1 1	_	_		<u>-</u> - -	- -	41	2
Cold Main Prim Htr	_	1021 1 1	_	_	_	- - -	_	41	7
	_	1021 1 1	_ _	<u>-</u>	_	<u>-</u> - -	_ _ _	41	7
625 850 FF Hot Main Red Htr Ctl Temp 2	_	1021 1 1	_ _	<u>-</u>		<u>-</u> - -	_ _ _	1411	7
FF Hot Main Prim Htr Ct]	_	1021 1 1	<u> </u>	<u>-</u> -	-	- - -		41	7
627 850 FF Hot Guard Heater Ctl Temp 2	_	1021 1 1	_	_	_	- - -	- - -	41	7
628 850 FF TC Group B Calibration Type B	_	1021 1 1	_	_	_	<del>-</del> - -	_	41	7
	     		—	- - -		-	- - -	- -	! _
0	3.4		. 2	5 5	. 2	9 9 9	77	7 7	. 8
3 67	0 6	3 5 7 8	-		7	5 6 7	1 2	5 8	0
•	,								

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 26 of 38)

	ICIO	I MN I NM I	IT!	DATA C	DATA DESCRIPTION	- -	MON I C I	1111111111111	11111	1
ENTIC NI	S W	so l	IXIOI	Ι.	1		REOLAI		ļ <b>-</b>	- E
<del>-</del>	VIQI	16.1/61	P   START	_	END   DATA	VALUE	TE	ICINCISID	- ×	= =
K .  DESCRIPTION	2 <u>3</u>		<u> </u>	WDIBTIWDIBTIY	BTIY	-		ITI DI		В
 4 -		_	_	=	<u>a</u>	_	NICIOI	13   E		드
 	X		_	_	<u> </u>		TIPIEI	-	<u>a</u>	<u>=</u>
1620185018F TC Grown B Calibration Type S	- 18	1021	-	_		_	  -  -	  -  -  -	141	121
TO Group B Calibration Type		1021	· –	_	_		_	_	141	121
TOTAL CONTRACT TO THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF	 	1021	-	_	· –	· <del></del>	_ _ _	_	141	121
TEEA COOLAND FLOW #1		1021	_		- -		_ _ _	<u>-</u>	41	-
850 FF Sample 4 Temp 1	- -	1021	_	_	_ _	_	<u>-</u> -	- -	41	_
Sample 3 T	_	1021	_		<del>-</del>	-	_ _ _	- - -	141	_
850 FF Sample 2 T	_	1021	_	_	<u>-</u> -	_	<u>-</u> -	_	41	-
850 FF Sample 1 7	<u> </u>	1021	_	<del>-</del>	_	_	<u> </u>	_ _	-41	_
850 FF Cold Main Red Htr Ctl ?	_	1051	_	_	_ ·	_	·	· ·	-41	
	<u>—</u>	1051	<u>-</u>		_	_	_ ·	_ ·	141	
FF TC Group D Calibration Type	- - -	1051	_	<u> </u>	_ ·	_	<u>-</u> :	·	4	
D Calibration Type	ж -	1021	<u>-</u>	_	_	_	_ :	<u>-</u> -		-
FF Cold Guard Heater Ctl 7	_ _	1051	<u>-</u>	_	_ _ _	_	 	_	-41	
Cold Main Prim Htr	- -	1051	_	_	_		_ ·	_ ·	16-	
Booster He	<u>-</u>	1021	_	_	- - -		 	 	141	
850 FF Hot Guard Heater Ctl Temp 1	<u>-</u>	1021	_	<u> </u>	_ ·		 	 	-	7 1
850 FF TC Group C Calibration Type		1051	_			_	 	<u> </u>	- 41	1711
850 FF TC Group C Calibration Type		1021	<u>-</u> -	<del>-</del> -			 		7 7 7	121
850 FF TC Group C Calibration Type	<u>~</u>	1021	<u> </u>		<del>-</del> -			 	-	171
FF Hot Main	<u>-</u>	1021	_ ·		_ ·		<u> </u>	 	-	7 .
850 FF Sample 2	<u>-</u>	1021	<u> </u>		<u> </u>		 	 	7 7	
Sample 1	_	1021	_	_	_ ·		<u> </u>	 	T # -	
FF Sample 6	<u>-</u>	1051	_	_	·		<del>-</del> -		-	
Sample 5	<u> </u>	1021	_	_	_		- ·	<u> </u>		
653   850   FF Sample 4 Temp 3	_	1021	_	<u>-</u>	_		_ ·	- ·	141	
654 850 FF Sample 3 Temp 3	<u>-</u>	1021	<u>-</u>	<u>-</u>	_ _ _			_ ·	41	_
850 FF Sample 2	<u>-</u>	1021	_	<u>-</u>	- -		_ ·		41	_
656 850 FF Sample 1 Temp 3	<u>-</u>	1021	<u>-</u>	- -	_ _ _		- ·	_ ·	14.	
657 850 FF Sample 6 Temp 2	<u> </u>	1021	<u>-</u>	<b>-</b>	_		_ _ _	_	141	
850 FF Sample 5	_	1021	<u>-</u>	_	- -			- -	161	1711
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	-	-	- - - -	- -		  -	_      -	_	_
_ (		- 4	. 7	ۍ .		. 4	9	7 7 7	7	8
0 0 0	r C	c.	. 8	. E	5 2	5	6 7	1 2 5	8	0

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 27 of 38)

	ICIO	TISIMN NHI	DATA DE	DESCRIPTION	I MON I C.I	///////	1//////////////////////////////////////
ENT C N	SIMI		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-IREQIAI		
10	V I O I	<u></u>	START   END	IDATA	VALUE     L	ICIRCISID	_
R .   DESCRIPTION	<u>9</u> –	3 <u>3 </u>		- T	EE	DITOING	). IX IA
_ <del>R</del> _	10 IE	_	WD   BT   WD   BT   Y	TIXI	IVIXICI	II DI	_
_ 	1		- *- -	I _P I	INICIOI	121 E1	11 11
	포	1 101 /1 1	- - -	<u>  E  </u>	TIPIE	- -	_
	- -	1021 1 1	- - -		  -  -  -	- - -	41 2
е 3 Т	_	1021	_ _ _	_	_ _ _	_ _	14112
2 T	<u>-</u>	1021	- - -	<u>-</u>	- - -	<u>-</u> -	41 2
Sample 1 T	<u>-</u>	1021 1 1	- - -	_	- - -	<u>-</u>	14112
FF Sample 6	<del>-</del>	1021 1 1	- -	_	- - -	- - -	14112
850 FF Sample 5	<u>-</u>	1021 1 1	- - -	_	- - -	- - -	14112
850   FF	<u>-</u>	1021 1 1	- - -	<u>-</u>	<u>-</u> - -	- -	_
850   FF	<u>-</u>	1021 1 1	<u>-</u> : -	_	- - -	- - -	_
850 FF	<u>-</u>	1051 1 1	- - -	<u>-</u>	<u>-</u> - -	- -	_
850   FF	<b>-</b>	1021 1 1	- - -	<u>-</u>	- - -	- -	_
e E	<u>-</u>	1051 1 1	- - -	_	<u>-</u> - -	- -	_
Sample 1 7	<u>-</u>	1021 1 1	_ _ _	<u>-</u>	<u>-</u> - -	- - -	141   2
850   FF	<u>-</u>	1021 1 1	<u>-</u> -	<u>-</u>	- - -	- - -	14112
672 850 FF Sample 5 Temp 5	<u>-</u>	1021   1	- - -	- -	- - -	- -	_
	<u>-</u>	1021 1 1	- - -	_ _	<u>-</u> - -	- -	14112
850 FF Sample 3 7	<del>-</del>	1021 1 1	- - -	<u>-</u>	<u>-</u> - -	<u>-</u>	_
850 FF	<u>-</u>	1021 1 1	- - -	<u>-</u>	<u>-</u> - -	<u>-</u> -	-
850 FF Sample 1 7	<u>-</u>	1021 1 1	- - -	<u>-</u>	<u>-</u> - -	<u>-</u> -	_
850 FF Sample 6 1	_	1051 1 1	- - -	<del>-</del>	- - -	<u>-</u> -	_
850 FF Sample 5 1	<u>-</u>	1021 1 1	- - -	<u>-</u>	- - -	- - -	_
850 FF Sample 4 1	<u>-</u>	1021	- - -	<u>-</u>	_ _ _	- - -	41   2
850 FF Sample 3 Temp 4	<u>-</u>	1021   1	<u>-</u>	_	- - -	<u>-</u>	_
850 FF Sample 4 CJ Block	_	102	_	_	<u>-</u>	_	_
850 FF Sample 3 CJ Block		105   1	<u>-</u> -	<u>-</u>	- - -	- - -	_
850 FF Sample 3 CJ Block Temp	<del>-</del>	1051 1 1	- - -	<u>-</u>	- - -	- - -	_
850 FF Sample 2 CJ Block	_	1051 1 1	- - -	<u>-</u>	- - -	- - -	_
850 FF Sample 2 CJ Block Temp	<u>-</u>	1021 1 1	<u>-</u> - -	_	- - -	- - -	_
850 FF Sample 1 CJ Block	<u>-</u>	1021 1 1	<u>-</u> - -	<u>-</u>	- - -	- -	14112
850 FF Sample 1 CJ Block	<u>-</u>	1051 1 1	<u>-</u> - -	_	- - -	- -	_
688 850 FF RFM Water Outlet Temp	<u>-</u>	1051 1 1	<u>-</u> - -	<del>-</del>	- - -	- -	14112
	· 4	4 4 4		. ທ	. v.		7 8
· · · · · · · · · · · · · · · · · · ·			) (*		,		. «
		ם י					

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 28 of 38)

7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	[	1	1 1 1 1 1	- 1	1					777		
No.   DESCRIPTION   10   M   PIE     TI   CIRC SID   E   T   R   PI   PI   PI   PI   PI   PI   PI	_	cla	WN NH		DATA	DESCRI	PTION	NOW	<u>-</u> ج			
Name	CNI	S E	solosi	2			TAN AT	I NEX	<u> </u>		OISI	
Second Figure   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Continue   Cont	NOTEGIA COST	<u> </u>	2 3		- 1	END   D	OTU -	(E   E	<u> </u>		ONIC.	_
### 1	<u> </u>	2 2		3	DIBTIW	DIBTIY		×	<u></u>	_	_	_
Second Formation Communication	<u>×</u> .	1 -	<u> </u>	_	-	<u>-</u>		NIC	0	_	<u></u>	_
### ### ### ### ### ### ### ### ### ##		īΞ	<u> </u>		: — - —	<u> 교</u>		TIP	न	_	_	_
## 1910   F. Cold Zone CJ Block Temp   1   102   1   1   1   1   1   1   1   1   1	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	-	1021	-	-	-			- -	  -	_	14112
## 850 FF Hot Zone CJ Block Temp 1   021   1912   1912   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1913   1	Cold Louis Co Block 18mp			- - -		· –		_	_	_	_	=
## 10   10   10   10   10   10   10   10	850 FF Cold Zone CJ Block	<u> </u>	2 0	 		- 		- -	- -	_	_	_
850 FF RHV Cold End Shell Temp 2   002   1   1   1   1   1   1   1   1   1	Hot Zone CJ Block	<u>-</u> -	1701	 					- 	- -		
## SSOIFE RRH Hot End Shell Temp   022	FF Hot Zone CJ Block T	_	1071	- · - ·	 	- ·		<b>-</b> -		- 		
## ## ## ## ## ## ## ## ## ## ## ## ##	FF RFM Hot End Shell	_	1021	- · - ·				 		 		14112
## 150 FF IFEA Water Inlet Temp   102   1   1   1   1   1   1   1   1   1	FF RFM Cold End Shell	_	1021	_	<u> </u>	- · - ·	<u>.</u>	 	<b>-</b> -	 		
## 850 FF FEBA Water Outlet Temp   102	FF IFEA Water	_	1021	- - -	_	<b>-</b>		<u>-</u> -	_ ·	 		
850 FF RTD Mux 3 Calibration - Low	850 FF IFEA Water	_	1021	_ _ _	_	_	_	<u> </u>		 		
## ## ## ## ## ## ## ## ## ## ## ## ##	RTD Mux 3 Calibration -	_	1051	- -	_	_		- ·		 		
## ## ## ## ## ## ## ## ## ## ## ## ##	FF RTD Mux 3 Calibration -	_	1051	_ _ _	_	_	_	_ ·	<u>-</u> .	<u> </u>		
## ## ## ## ## ## ## ## ## ## ## ## ##	FF RTD Mux 2 Calibration -	_	1021	- - -	_	_		_ ·	<u>-</u> -	<b>-</b> -		
850 FF RTD Mux 1 Calibration - Low	850 FF RTD Mux 2 Calibration -	_	1051	_ _ _	<u> </u>	_	_		<u> </u>	<u> </u>		
## ## ## ## ## ## ## ## ## ## ## ## ##	FF RTD Mux 1 Calibration -	_	1021	- -	_ _	_	_	<u> </u>	- ·			
## ## ## ## ## ## ## ## ## ## ## ## ##	RTD Mux 1 Calibration -	_	1021	_ _ _	_	_		<u> </u>	<u> </u>	<u> </u>		
## ## ## ## ## ## ## ## ## ## ## ## ##	850 FF IFEA Upper Atmosphere	_	1021	<u>-</u>	<u> </u>	<u> </u>	_	<u> </u>	_ :	<u> </u>		
850 FF FTS Stepping Motor Temp   102	850 FF IFEA Lower Atmosphere	_	1021	- -	<u> </u>	_		<u> </u>	<u>-</u> .	- ·		
## ## ## ## ## ## ## ## ## ## ## ## ##	FF FTS	_	1051	_ _ _	_	<u> </u>		<u> </u>	 	<u> </u>		
## ## ## ## ## ## ## ## ## ## ## ## ##	850 FF SEM	<u>-</u>	1051	_ _ _	_	·		<u> </u>	 	 		
## ## ## ## ## ## ## ## ## ## ## ## ##	Ampoule Alignment	_	1021	_ _ _	_	<u> </u>		_ :		<u> </u>		
## ## ## ## ## ## ## ## ## ## ## ## ##	Sample 6 CJ Block Temp	<u>-</u>	1051	_ _ _	_	_ ·		<u></u> -	<u>-</u> -	<u> </u>		
## ## ## ## ## ## ## ## ## ## ## ## ##	FF Sample 6 CJ Block	<u>-</u>	1051	_ _ _	_	<u>-</u> -		<u> </u>	<u>-</u> -			
850 FF Sample 5 CJ Block Temp 1	Sample 5 CJ Block	<u>-</u>	1051	_ _ _	_			 	<u>-</u> -	 		
850 FF Cold Main Red Heater Current	Sample 5 CJ Block Temp	_	1021	<u> </u>		<u>-</u> -			- ·	 		
850 FF Cold Main Red Heater Current	Sample 4 CJ Block Temp	<u>-</u>	1021	_ _ _	_	<u> </u>		 	<u> </u>	<u> </u>		
850 FF Cold Main Red Heater Voltage	850 FF Cold Main Red Heater	_	1051	_ _ _	_	_	_		<u>.</u> 			
850 FF Cold Main Primary Heater Cur	850 FF Cold Main Red Heater	_	1021	_ _ _	_	_		_	<u>-</u> -	<u>-</u> -		
850 FF Cold Main Primary Heater Volt	850 FF Cold Main Primary Heater	<u>-</u>	1021	_ _ _	<u> </u>	_	_	<u>-</u>	_	_	_	-
	850 FF Cold Main Primary Heater	<u>-</u>	1021	<u>-</u> -	 -	<u> </u>	_	<u>-</u>	<u> </u>	_	_	
	850 FF Cold Guard Heater	<u>-</u>	1021	_ _ _	_	_	_	_	<u> </u>	<u> </u>		
1	850 FF Cold Guard Heater	<del>-</del>	1051	- -	_	- -	- ! - !	-	<u>-</u>	- <u>i</u>	-	<del>-</del> 1
0.0 34 4 4 4 4 5 5 5 5 6 6 6 7 7 7 7 7 7 7 9 9 9 9 9 9 9 9 9 9	1	- -		_ _	-	-		_	_	_ (	<u> </u>	_ (
90 3 5 7 8 1 3 5 7 5 6 7 1 2 5 8	- 0	3 4	4 4	4 4	2	S		9 9		1. (	<b>-</b> ,	
	<b>,</b>	0 6	3	7 8	-	2	_	5 6 7	_	1 2	2	

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 29 of 38)

	ıcıu	Σ	DATA DESCR	DESCRIPTION	HON   C	//////	111111111111111111111111111111111111111
	S W	IXIOISOIC	1 1		REO		
INO.10 0I	V O	31 IP	ART END	IDATA VALUE		CIRCISID	
R .   DESCRIPTION	<u>9</u>	<u>-</u>	I.+	<del>-</del> :	1 2 3		<u> </u>
_ <del>_</del> _	3 0	_	WD   BT   WD   BT   Y		INIXICI		4
	<u>-</u>	+  x  s  -	<u>-</u>	_		_	_
_ _ _	<u>×</u>	_			TPF	- -	10 E
17191850188 RTO Mix 8 Calibration - Low		1021	-	_	  -  -	  -  -	41 2
850 FF NTD Mix 8 Calibration -	- -	1021	- - - -		- - -	_	41   2
DED May 7 Calibration -	- <b>-</b>	1001		_	- - -	- - -	141121
1950IFF AID Max 7 Calibration -	 	1021	 	- <del>-</del> -	 	- - -	41   2
(850)FF RTD Mux 6 Calibration -		1021	· -	. <del>-</del>	- - - -	- - -	41 2
850 FF RTD Mux 6 Calibration -	- -	1021   1	- - -	-	_ _ _	_ _ _	141121
FF RTD Mux 5 Calibration -	_	1021 1 1	- - -	_	<u>-</u> - -	- -	41 2
	<u>-</u>	1021 1 1 1	- - -	_	- - -	- - -	_
727 850 FF RTD Mux 4 Calibration - Low	_	1021 1 1	- - -	_	- - -	<u>-</u> -	_
FF RTD Mux 4	_	1021 1 1 1	- - -	_	- - -	<u>-</u> -	_
729 850 FF IFEA LOWER Humidity	_	1021 1 1	- - -		- - -	<u>-</u> -	_
850 FF	<u>-</u>	1021 1 1 1	- - -	_	- - -	<u> </u>	_
850   FF	_	1021 1 1 1	- - -	_	<u>-</u> - -	- - -	_
850 FF Furnace I	_	1021 1 1	- - -	_	- - -	<u>-</u> -	_
850 FF Stepping Motor	_	1021 1 1	- - -	_	- - -	_	_
850 FF Stepping Motor Phase	_	1021 1 1	- - -	_	<u>-</u> - -	- - -	_
Stepping Motor Phase	_	1021 1 1 1	- - -	_	<u>-</u> - -	- - -	-
1736 850 FF Stepping Motor Phase A Volt	<u> </u>	1021 1 1 1	- - -	_	_ _ _ _		_
1737 850 FF Hot Main Red Heater Current	<u> </u>	1021 1 1 1	- - -	_	- - -	_ _ _	_
FF Hot Main R	<del>-</del>	1021 111	- - -	_	- - -	<u>-</u>	_
Hot Main Primary Heater	<u>-</u>	1021 1 1 1	- - -	_	_ _ _	_ _	_
Hot Main Primary	<u>-</u>	1021 1 1	_ _ _	_	_ ·	_ ·	
Hot Guard Heater	_	1021 1 1	_ _ _	_	_ ·	_ ·	
1742 850 FF Hot Guard Heater Voltage	<u>-</u>	1021 1 1	- - -	_	- - -	- -	_
743 850 FF Hot Boost Heater Current	_	1021 1 1	- - -		- - -	_	_
744 850 FF Hot Boost Heater Voltage	<u>-</u>	1021 1 1	- - -	_	_ _ _ _	_ _ _	41 2
(745)850 FF SMS Board Velocity Reading	<del>-</del>	1021 1 1	- - -	_	<u>-</u> - -	_ _ _	_
746 850 FF Experiment Main Bus Voltage	_	1051 1 1	- - -	_	_ _ _	- - -	-
Experiment Main Bus	_	1021 1 1 1	- - -	_	_ _ _	<u>-</u>	
748 850 FF IFEA Absolute Pressure 2	<u>-</u>	1021 1 1	- - -	_	- - -	<u>-</u> -	41 2
	-			-			-
- <	- (*	4 4 4			9 9	1 11	7 8
	7 (	r 0	, ,		, ר י ע		
3 6 7		3 2 / 8		_	, o	7 7 1	

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 30 of 38)

	lc Iu	I I I S I WI I WI	DATA DES	DESCRIPTION	MONICI	<i>HIIIIIIIIIII</i>	11111	Ξ.
ENTIC NI	SIWI	ISOlOSIOIXI	DATI FAD	DATA VALUE	REQ   A   E     L	CIRCISID	3 Q1	- <u>-</u>
	<u> </u>	W FE		17.		DITOINO	_	<u> </u>
I B I	3101	Ξ	WDIBTIWDIBTIY	IXI	INIXICI	II DI	<u>a</u> !	<u>B</u>
- <del>-</del>	<u> </u>	#1  X  S	<u>-</u>	I B	INICIO			<u> </u>
	ΙΚΊ	1 101 /1 1	-	E	LIBIEL		a	<u> </u>
		1021 1 1 1	-	  -	- - -	- - -	41	121
830 FF IFFA ADSOILCE	- 	1021	_	_	_ _ _	- -	41	<u>-</u>
850 FF IFEA Upper numary	 					_	141	121
851 RC SEM Index Motor RCCB		1021		. –	- - -		41	15
BSI   RC SEM INGEX MOUSE NOOD OFF	 	1001	. <u>-</u>	. <b>-</b>	_ _ _	- - -	41	_
003 831 RC Ampoute Not Frocessing		1021 1 1	· <del>-</del>	_	- - -	- - -	41	_
651   RC Indexing	. <u>-</u>	1021 1 1	<u>-</u>	_	<del>-</del> - -	_	-41	_
85118C Indexing	_	1051 1 1	- - -	<u>-</u>	_ _ _	_ ·	141	
8511RC Car Spacer Pl	_	1021 1 1	_ ·		_ ·	 	4.	7 0
851 RC Car Spacer Plt	_	1021 1 1	_		 	 		
851 RC Car	<u>-</u>	1021 1 1	_	<b>-</b> -	 	 	1 7 7	
851	_	1021 111	_	<u> </u>	 	 	1 .	
851 RC Car Trk Extr Right	<u>-</u>	1051 1 1	_ ·		 	 	141	
851 RC Car Trk Extr Right Lim	_	1021 1 1	_	_	 	 	1 7	
RC Ampoule Align Mtr RCCB	_	1021			 	 	[7]	
RC Ampoule Align Mtr	<u> </u>	1021	 	<b>-</b> -	 		- 41	
RC Ampoule Align	_	1021	 		 	 	- 4	
851 RC Ampoule Align		1021	 	<u> </u>			141	_
RC Ampoule Align	<u> </u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			 	 	141	-
stracted	_	1021	- · - ·		 	 	141	
851 RC Ampoule Spt Plt Mtr RCCB	<u> </u>	1021			 	 	141	
Spt Plt Mtr	_	1 1 1 1701	<u>-</u> -			 	141	-
851 RC Ampoule Support	<u> </u>	1 1 1701			 	 	141	-
Secure	_ :	1 1 1 1701	 		 		141	-
Not Ret		1021	 			 	141	
Support Ret	_	1021		<u> </u>	 		1 4 1	
1025 851 RC Core HD Motor RCCB Off	<u>-</u>	1051 1 1		<b>-</b> -	 		1 4 1	
851 RC Core HD Motor RCCB	<u> </u>	1021	<u> </u>	- · - ·	 	 	161	
1027   851   RC Core Hold Down Not Extended	<u>-</u>	1021 1 1	- · - ·	<u> </u>	 	 	<u>י</u>	
028 851 RC Core Hold Down Extended	_	1021 1 1	- -		- ! - !		-	- 1
	- - -	-	_	_	<u>-</u> -	_		-
	. <del>4</del>	4 4 4 4	2	5 5	999			ထေ
	0 6	3 5 7 8	٣		5 6 7	1 2	2 8	2

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 31 of 38)

1	1010	TISIMNINMI	DATA D	DATA DESCRIPTION	NOMI	///////////////////////////////////////	//////	
INO. 10 OI	0 4 E C		STADTI FND	TIPATA VATUE	KEQ A  ATIE     11	0100101	! -	<u> </u>
<u>~</u>	<u> </u>	N E			3	IDITOTNO.		- 4
_ <u>~</u>	IUE		WD BT WD BT Y	BT Y	IVIXICI	TID	-	B
- <u>-</u> -	<u> </u>	I IXI SI I	- - -	IBI	INICIO	2   E	<u> </u>	Ξ
-	IK			<u>=</u>	TIPIF	- -	<u>_</u>	필
029 851 RC Core Hold Down Not Retracted	  -  -	1021 1 1	- - -	- - -			141	121
_	_ _	1021   1	<u>-</u>	<u> </u>		- - -	41	2
031   851   RC Fail Safe Brake RCCB Off	_	1021	<u>-</u>	_		_	41	_
851 RC Fail	_	1021 1 1	_ _	- -	- - -	- -	141	_
851 RC Rapid Xlation Clutch RCCB	_	1021 1 1	<del>-</del>	- -	- - -	<u>-</u>	41	_
851 RC Rapid Xlation Clutch RC	_	1021 1 1	<u> </u>	<u>-</u>	<del>-</del> - -	- - -	141	_
851 RC Rapid Xlation Mtr RCCB	_	1021	- -	<u>-</u>	_ _ _	<u>-</u> -	41	_
851 RC Rapid Xlation Mtr RCCB	<u> </u>	1021	_ _ _	<u>-</u>	_ _ _ _	- - -	41	
851 RC Step Motor Clutch RCCB	<u> </u>	1021	- -	<u>-</u>	_ _ _	<u>-</u> -	41	
851 RC Step Motor Clutch RCC	<u> </u>	1021	_ _	_	- - -	<u>-</u> -	141	_
851   RC Step Motor Drive RCCB	<u> </u>	1021	_ ·	_	_ _ _	- - -	41	_
851   RC Step Motor Drive	_	1021 1 1	- -	<u>-</u>	_ _ _	<u>-</u> -	41	121
851 RC Furn Extrme Trvl N	_ ·	1021	- -	<u>-</u>	_ _ _	- - -	41	_
851 RC Furn Extrdme Trvl Exc	_	1021	- -	<u>-</u>	_ _ _ _	- - -	41	_
3 851 RC Furnace Position	_	1021	<u>-</u> -	<u>-</u>	_ _ _	- - -	41	_
851 RC Furnace Position	_	1021	- -	<u>-</u>	_ _ _	- - -	141	_
851 RC System Bus Relay	_	1021 1 1	<u>-</u> -	<u>-</u>	- - -	<u>-</u>	41	_
8511RC System Bus Relay	_	1021 1 1	<u>-</u> -	<u>-</u>	<u>-</u> -	<u>-</u> -	41	
851 RC PCS Utility RCCB	_	1021 1 1	- -	<u>-</u>	_ _ _	- - -	41	_
851 RC PCS Utility RCCB On	<u>-</u>	1021 1 1	- - -	<u>-</u>	- - -	- - -	41	_
851 RC SEM Indexing Jog CW S	<u>-</u>	1051 1 1	<u>-</u>	<u>-</u>	- - -	- - -	41	12
851 RC SEM Indexing Jog CCW	<u> </u>	1021	- -	<u>-</u>	<u>-</u> -	- - -	41	_
851 RC Argon Fill Valve RCCB	_ :	1021	_	_ _	_ _ _	<u> </u>	41	-
851 RC Argon Fill Valve	_	1021 1 1	- -	<u>-</u>	_ _ _	- -	41	_
B51   RC Argon Fill Valve	_	1021 1 1	- - -	<u>-</u>	_ _ _	<u>-</u> -	41	12
851 RC Argon Fill Valve	_	1021 1 1	- -	<u>-</u>	_ _ _	_ _ _	41	121
851 RC IFEA ABS Press 1 RCCB	_	1021 1 1	- - -	<u>-</u>	- - -	_ _ _	41	12
851 RC IFEA ABS Press 1 RCCB	_	1021 1 1	- -	<u>-</u>	_ _ _	- - -	41	121
851 RC IFEA ABS Press 2 RCCB	_	1051 1 1	- - -	<u>-</u>		- - -	141	5
058   851   RC IFEA ABS Press 2 RCCB On	<u>-</u>	1021 1 1	- - -	_	<u>-</u>	- -	41	121
!	-		-				-	-
. 0	. E	4 4	- 10 - 10	- ທ	- 9	, , , ,	٦.	- α
3 67	0	3 5 7 8	. E	5 7	5 6 7		- œ	) C

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 32 of 38)

	1			TO ROM		11111111
_	lcla	NMISIT	DATA DESCRIPTION	SOS I		
ENTIC NI	SIW		TI FUN INATA VALUE		ICIRCISID	E T
10	<u>v (</u>		T	3 3	ONIOIIGI	_ _
I IR . I DESCRIPTION	2 12		WDIBT	v x c	IT! D!	IP IBI
<u> </u>	3 - 1		a    #	· lololul	_	
 	X		131 1	TIPIFI	-   -	D  E
				-	- -	41 2
851 RC Vacuum Vent VIv RCCB	<u> </u>	1001			_	41 2
VIv RC	- ·	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		- - - -	. <u>-</u>	41   2
Valve	<u>-</u> :	1 1 1 1 1701		- - - -	. – . –	4112
Open	_	1021		 	- - -	_
et Valve RCCB	_	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	  	 	-
t Valve	_	1021	 	 	 	-
at Valve		1021	 	  	. <u>-</u>	_
alve Norr	<u> </u>	1 1 1 1 1701	 	 	- - -	
1067 851 RC Water Outlet Vlv RCCB Off	<u> </u>	1 1 1 1201			- - -	-
1068 851 RC Water Outlet Vlv RCCB On	<u> </u>	1021		 	 	-
8511RC Water Outlet Valve	_	1021 1 1 1		 	 	_
851 RC Water Outlet Valve N	_	1021	 	  	 	-
7	_	1021		 		-
-	_	1021 1 1 1	 	 	 	-
ailure 2		1021			- 	_
-	<u> </u>	1 1 1 1201			. – . –	_
7	_	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 	 	_
-		1021	 	 	 - 	_
N	_	1021	 		 	141   2
-	_	1021	 	 	- - -	_
N	<u>-</u>	1 1 1 1701		 	-	14112
RC Ampoule 5 Failure 1	_ : _ :	1021	 	 	. <u>-</u>	_
2 St	<u>-</u> :	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		  	. – . –	41   2
Failure 1 St	<u> </u>	107 1 100	 	  	· -	_
7	_	1071		 	. <del>-</del>	14112
851 RC Cartridge 1 Failure 1	_	1021	 	 	- <del>-</del> 	14112
851 RC Cartridge	_ _	1021   1	<u>-</u> -	 	 	
1086 851 RC Cartridge 2 Failure 1 Status	<u> </u>	1021 1 1 1	 	 	 	
851 IRC	_	1021 1 1	 	 		
RC	<u>-</u>	1021 1 1 1				- 1
	-		-	- - -		
	- M	4 4 4 4	5 5 5 5	999		٦ 8
		3 5 7 8	3	567	1 2 5	0 8
3 6 7		· .				

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 33 of 38)

	Iclu	I MN I NM I	ISIT	DATA	DESCRIPTION	-	MONICI	/////	///////////////////////////////////////	1///
ENT C N	S W		O X		i i		REQIAI			
To .	<u>V</u> 0	16.1/6	<u> </u>	START! E	END IDATA	VALUE	Ir	ICIRCISID	SID IE	<u>H</u>
DESCRIPTION		<u>3</u>	딢		LT		EIEI.I	lollal	NO.	( A
· <u>∝</u> ·	10 E	<u>_</u>	_	WDIBTIWDIBTIY	BILL		VIXICI	IT D	_	P (B)
·	=	<u>-</u>	<u>=</u> ×	<del>-</del> -	IB		NICIOI	2   E	=	11
	-K	<u> </u>	- Ial	- -	<u>=</u>	_	TIPIFI	_ _ _	=	E
1089   851   RC Cartridge 4 Failure 2 Status	- -	1021	- - -	-	-				-	10111
4 Failure 1	- -	1021			 			 		7 1
5 Failure 2		200	 							1711
8511RC Cartridos 5 Failure 1	 	200	 	 	<u> </u>	-		- : - :	-	11   2
8511RC Cartridge 6 Estime 2	 	70	 		<del>-</del> -		_ :	- : - :	<u> </u>	11   2
851 RC Cartridge 6 Failure 1		102	 				 	 	_ :	112
ing Mod RCCB	- -	1021	- - -		 		 	 		17 17
851 RC Mech Pulsing	· –	105	- - -	- - –	- <del>-</del> 		 	 		
RC Peltier Pulsing D	- -	021	- -	- -	- - -	-	 	 		
1098 851 RC Peltier Pulsing Drv RCCB On	_	02		_	- - -	-	- - -			
RC Peltier	<u>-</u>	1021	_ _	_	- -	-	- - -			
_	_	1021	_ _ _	_	_	-		 		
851 RC Peltier	_	1051	_ _ _	_	- - -	-	- - -	 		
851 RC Peltier	_	1021	_	_	_		- - -	- - -		
851 RC Peltier	_	1001	_ _	_	_	-	- - -			
851 RC Peltier Co	_	1021	<u>-</u>	_	_	_	- -	- - -		-
851 RC Cold Guard Mod RCCB	<u>-</u>	1021	- -	<u> </u>	_ _ _	_	_ _ _	- - -		-
851 RC Cold Guard Mod RCCB On	_	1021	_ _	<u>-</u>	<u>-</u>		_ _ _	<u>-</u>	-	41   2
RC Cold Main Prim Mod RCCB	_	1051	<del>-</del>	<u>-</u>	_	_	<u>-</u>	_	-	41   2
IRC Cold Main Prim Mod RCCE	<u>-</u>	1021	<u>-</u>	<u> </u>	<u>-</u>	_	_ _ _	_	-	41121
RC Cold Main Red Mod RCCB	_	1021	<u>-</u>	<u>-</u>	- -	_	<u>-</u>	<u>-</u> -	_	41   2
RC Cold Main Red	<u>-</u>	1021	_ _ _	<u> </u>	- -	-	<u>-</u>	_ _ _	-	41   2
RC Hot Boost Mod A RCCB	_	1021	_ _	<u>-</u>	- -	_	_ _ _	_	-	41   2
INC Hot Boost Mod A RCCB	_	102	- -	_	- -	_	<u>-</u> -	_ _	-	41   2
RC Hot Boost Mod B RCCB	_	1021	<u>-</u>	_	_ _ _	_	- - -	_ _ _	-	41   2
851 RC Hot Boost Mod B R	<u> </u>	1021	_ _ _	_ _	_ _ _	_	<u>-</u> -	_	-	41   2
Hot Guard Module	_	1051	<u>-</u>	<u>-</u>	<u>-</u>	_	_	_		41121
851 RC Hot Guard Module RC	_	1021	_	<u>-</u>	_	_	_ _	- - -	-	1121
851 RC HotMain Prim Mod A	_	1001	_ _ _	_	_	_	- - -	- -		1121
118   851   RC HotMain Prim Mod A RCCB On	_	1021	<u>-</u> -	<u>-</u>	<u>-</u>	_	. <u> </u>	- - -	_	1   2
	-					-	-		-	-
0 0 0	- 6	- <	- <	- u	- u	- (	- r - v	- r	- r	_ <
3 67	, 0	r (	, c	) -	ט ר	0 (	٠.	- (		× α
	٧ د	2	Ω ~	۲ ۲	ر د	S		2	æ	c

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 34 of 38)

	CIU	TISIMNINAI	DATA		DESCRIPTION	WON   C	///////////////////////////////////////	11111	
	_			-		-   REQIA		1	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		_	START	END	DATA VALUE		C RC SID	_	E IT
	9	I IN IFIE			-   T	E   E   .	Hollal	_	_
	UE	_	TE   OM	WDIBTIWDIBTIY	IX I	IVIXICI	II DI	_	_
	1		_ =	_ =	la!	INICIO	3   E	_	1  T
	<u>×</u>	101 /1	_	_	<u> </u>	TIPIF	- -	-	0  E
111918511BC Hot Main Drim Mod B RCCB Off	-	1021	-	-	-		- - - -	_	41121
1851 BC Hot Main Drim Mod B RCCB	-	1021	_	_	_	<u>-</u> -	_ _	_	41   2
85110C Hot Main Red Mod & RCCB C	. <u>-</u>	1021	. <b>–</b>	_	-	_ _ _	_	_	41121
18511RC Hot Main Red Mod A RCCB		1021	- -	<u> </u>	· <b>_</b>	_ _ _	_	_	41   2
1851 RC Hot Main Red Mod B	_	1021	_	_		- - -	_ _ _	_	41   2
418511RC Hot Main Red Mod B	_	1021 1 1	_	_	_	- - -	- -	_	_
5 851 RC PCS Airfl	_	1021 1 1	_	_	_	<u>-</u>	_ _ _	_	41   2
_	_	1021 1 1	<u>-</u>	-	<u>-</u>	_ _ _	_ _ _	_ ·	_
851 RC SCS Airflow 1	_	1021 1 1	<u>-</u>	_		_	- ·	_	
851 RC PDS Airflow 1 Stat	_	1021 1	_ _	-	<u>-</u>	_ ·	_ ·	<b>-</b> ·	
	_	1021 1 1	_	_	_	_ ·			
	_	1021 1 1	_	- -	_	_ - -	- ·	_ `	-
Calibration Type	_	1021 1 1	_	_ _	_			-	
B Calibr	_	1021 1 1	- -	<b>-</b>	_	_ ·	- -		
133   85   1   RC Hot Guard Heater Ct   Temp 2	_	1021 1 1	<u> </u>	<u>-</u>	<u>-</u>		_	-	_
134   851   RC TC Group B Calibration Type B	_	1021 1 1	_	<u>-</u>	<u>-</u>		- - -		
Red Htr Ctl Temp 2	<u>-</u>	1021 1 1	<del>-</del>	_	_	_ _ _	- ·		41   2
N.	<u>-</u>	1021 1 1	<u> </u>	_	_	_ ·	- ·		<del>-</del> -
Ct 1 T	<u>-</u>	1021 1	_	<del>-</del>	_	  	<u> </u>		41121
138   851   RC Booster Heater Ctl Temp 2	_	1021 1 1	_	_	_	_ ·	- ·		
851 RC TC Group A Calibration Type	_	1021	_			- · - ·	 		4114
851 RC Cold Guard Heater Ctl Temp 2	_	1021	<b>-</b> ·			 		_	4114
851 RC TC Group A Calibration Type	_	1021	- ·	<u> </u>		 	 		7 -
851 RC TC Group A Calibration	_	1021	_ ·		<b>-</b> -	 	 		7 -
Htr Ctl	_	1021	_	_	_	_ ·		_	
ted Htr Ctl Temp l	_ _	1051 1	_	_	_ ·	 	 		4117
1145 851 RC TC Group C Calibration Type K	_	1021 1 1	<u> </u>	<u> </u>	<del>-</del>		_		
1146 851 RC Hot Main Red Htr Ctl Temp 1	_	1051 1 1	<u> </u>	<u>-</u>	_`	_ ·	_		
RC TC Group C Calibration Type	_ _	1021 1 1	_	_	_				41   2
148   851   RC TC Group C Calibration Type S	<u>-</u>	1021 1	<del>-</del>	<u>-</u>	<b>-</b>	-	- ! - !	_	17 16
	-	-			_	. <del>-</del>	_	- -	-
000	3.4	4 4	4 5	5 5	2	999	11	-	8
	0 6	3 5 7	1		7	5 6 7	1 2	5 8	0
0		)	,						

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 35 of 38)

		MN   NM   S   T	DATA DESCRIPTION	ON IMONICI	///////////////////////////////////////	1/////
_	s	-IXIOISOIOS	;	REOI		1
100	DIA 1G.	1/G1 1P1	START! END   DATA	VALUE     L	ICIRCISID	<u> </u>
DESCRIPTION	_ <u>_</u>	FE	L	E  E  -	IDITOINO.	_
-   R	<u>=</u>	_	WDIBTIWDIBTIYI	$\overline{x}$	14 D	18 1B1
11	_	IS IXI I	1al   #1		3  E	I  I'
IK I I I I I I I I I I I I I I I I I I	<u>-</u>	1 101 /1	E	TIPIF	- -	1D  E
114918511RC Booster Heater Ctl Temp 1	01 1	21	-	- -	- - -	41 2
85118C Hot Guard Heater Ct	1 102		-	_	_	41 2
Cold Guard Heater Ct	-			- - - -	- -	141121
8511RC Cold Main Prim Htr Ct	102				- - -	1
8511RC TC Group D Calibration	102	2		_	_ _	141121
851 RC TC Group D Calibration Type	102	2 1	_ _ _	_ _ _	_ _ _	141121
851 RC Cold Main Red Htr Ctl 7	1 102	21	- - -	<u>-</u> -	_ _	141121
851 RC TC Group D Calibration	102	21 1 1	_ _ _ _		_ _ _	141   2
Temp 1	102	21 1 1 1	_ _ _ _	_ _ _	_ _ _	141121
Sample 1	102	21 1 1	_ _ _ _	_ _ _	- -	41   2
4	1 102	21   1	- - -	<del>-</del> - -	_	141121
8511RC Sample 3	1 102	21   1	_ _ _ _		<u>-</u> -	141   2
851 RC Sample 6	1 102	21 1 1 1	- - -	_ _ _	<u>-</u>	_
162 851 RC Sample 5 Temp 1	1 102	21 1 1	_ _ _ _	_ _ _	<u>-</u>	_
163 851 RC Sample 2 Temp 2	<u>-</u>	021 1 1 1	- - -	_ _ _	-, - -	141121
164 851 RC Sample 1 Temp 2	1 102	21 1 1	_ _ _ _	_ _ _	<u>-</u>	_
851 RC Sample 4	<u>-</u>	021 1 1 1	_ _ _ _	_ '	<u>-</u> -	_
851 RC Sample 3	<u>-</u>	021   1	_ _ _ _	_	<u>-</u>	_
Sample 6	<u>-</u>	21   1	- - -	_ _ _ _	<u>-</u>	_
RC Sample 5	<u>-</u>	02	- - - -	_ _ _	- -	_
8511RC Sample 2	<u>-</u>	021 1 1	_ _ _ _		_ ·	_
851   RC	<u> </u>	021   1	_ ·	— ·	- · - ·	
851 RC Sample 4	<u>-</u>	021 1 1	_ ·		 	
851 RC Sample 3	<u>-</u>	02	_ ·		_ ·	
851 RC Sample 6	<u>-</u>	021 1 1				
851 RC Sample 5	<u>-</u>	021 1 1 1	_ ·		- ·	_
851 RC Sample 2	<u>-</u>	021, 1 1	- - -	·	- ·	_
851 RC Sample 1	<u>-</u>	021   1	_ '	_ :	_ ·	41 2
851 RC Sample 4	<u>-</u>	021 1 1	_ _ _ _	_ _ _	_ _ _	41   2
178 851 RC Sample 3 Temp 4	<u>-</u>	021 1 1 1	- - -	- - -	- - -	41 2
		- -		-	_ _ _ _	-
0	3 4	4 4 4		9 9 9	7 7 7	7 8
, c		5 7 8		5 6 7	1 2 5	8 0
~ •				· >		

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 36 of 38)

	1	1	1	1 1	1 1 1	1		11111			1111	1///	
	1010	MN NH	MISIT	_	DATA D	ESCR	DESCRIPTION	_				1	
_ _	SIM	0 0 0 5 1	9	_		1		REZ		CIRCISID	TD 1E	I	
<u>ပ</u>	VIO			START	T END	_	DATA VALUE			DI TOUNO.	_		
-	9 -	<u>=</u>		_	1 2	7   50	• 		_	10	d l	_	
	3101	<u>-</u>	_	MOM	MD BT I WOLD I	1 1 1		OLOIN	_	3 E	<u> </u>	11	
<u>-</u> -	1	<u>s :</u> 	×	 <b>:</b> -	<u> </u>	<u> —</u>	- =	TIPLE	_	_	<u>-</u>	<u>=</u>	
	- Lul	-	Ĺ	-	•				Ì -		7 -	41 + 2	
	-	1001	_	_	_	<u> </u>	_	_ _ _		 			
117918511RC Sample 6 Temp 4	 	100	- - -	. <del>-</del>	_	_	_	_ _ _	_	- · - ·	_ :		
118018511RC Sample 5 Temp 4	<u> </u>	5		. <u>-</u>	_	_	_	_ _ _	_	<u>-</u>			
851 RC Sample 2	<u>-</u> -	70	 		-	. <del>-</del>		_ _ _	- -	_	<u>.</u>		
A511RC	_ ·	1701				. <del>-</del>		_ _ _	_ _	_	_	_	
8511RC Sample 4 Temp	<u>-</u> -	70	 					_ _ _	_	_	<u> </u>		
851 RC Sample 3 Temp	<u> </u>	70				· -		<u>-</u> -	_	_	_	41   2	
8511RC Sample 6 Temp		1701				-		_ _ _	<u> </u>	<u> </u>	_	_	
8511RC	_ ·	1701			-	· –	. –	<u>-</u> -	_	<u> </u>	_		
851 I BC	_	1701				· -		_	_	_	_	_	
1951 RC Sample 1 7	_	1001				 		_	_	- -	_	-	_
1951 BC Sample 4 T	<u> </u>	102						_	_	_	_	_	_
osile Sample 3 I	<u>-</u>	1051	_		<b>-</b> -			_	_	_	_	_	_
BOLLING COMPAND 5 T	<u> </u>	102			<b></b>				_	_	_	_	_
T y of came of the	<u> </u>	1021	_		<b>-</b> -			- - -		_	_	41   2	_
BOLLING SAMPLE C. C. C. C. C. C. C. C. C. C. C. C. C.	_	102	<u>-</u>	_					_	_	_	41   2	_
831 RC IEER Mater Outlet	<del>-</del>	102	_	_ ·				- - -	. <u>-</u>	_	_	41   2	_
INC REM HOLEN	<u>-</u>	102		<u>.</u>				. <u>-</u>	_	_	_	_	_
RELIEC REM Cold	_	102	 	 			<b>-</b> -	<u> </u>	_	- -		_	_
8511RC Hot Zone CJ Block	_	201		 	 			_	_	_ _		_	
8511RC Hot Zone CJ Block Temp 2	_	70	 	 	 			<u>-</u>	_	_			
8511RC Cold Zone CJ Block	<u> </u>	701	 		- 		_	<u>-</u>	_	<u>-</u>			
851 RC Cold Zone CJ Block	 	200		- 	· -	. –	_	<u>-</u>	_	_		7116	
RC Sample 1 CJ Block		200	 		· -	_	_	<u>-</u>	<u> </u>	_	_	7   1   6	
851 RC RFM Water Outlet T	 	200	- 	. <i>-</i>	. <del>-</del>	_	_	<u>-</u>	_	_			
851 RC Sample 2 CJ Block	 	7 0	 	 	. – . –	-	_	_	<u> </u>	_			
8511RC Sample 1 CJ Block	<u>-</u> -	701	 	 	 	. –	. <b>–</b>	<u> </u>	<u>-</u>	_ _			- :
ASTIRC Sample 3 CJ Block	_	70		 	- 		. <b>-</b>	_	_	<u>-</u>	_	_	_ :
8511RC Sample 2 CJ Block	_	701	<del>,</del> -	 		-	· -	_	_	<u>-</u>	_	_	_ :
asing Sample 4 CJ Block Temp	<u>-</u>	701	- ·	 				_	_	<u> </u>	_	41   2	_
RC Sample 3 CJ	<del>-</del>	102	- -	- i	-   -	-		- 1	. !		1	1	1
	-	i -	- -	_	_		_	- '	. (	<u> </u>			_ ~
_	- ო	4		4 4	2	5	2	ָם סים	ء م	۰ ،	- v	. 0	0
. 000	, 0	3	ر.	7 8			7	٥		7 1			
9	•												

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 37 of 38)

	ICIO	WN I NW I	ITISIMN	DATA	DESCR	DESCRIPTION	MONICI	////1	(11111111111)	1////
lo	V I D I Y			START	END ID		REQIA!		010	-
DESCRIPTION	<u>9</u>	<u>3</u>	FE E	-	L		EE	DI IOINO.	NO.	X
· · ·	<u>=</u> 10	<u> </u>	_	WDIBTIWDIBT			VIXICI	T		_
	<u> </u>	2 -	<u> </u>	<b>-</b> 	<u> </u>		NICIOI	S   E		
120918511BC Cample 5 01 D1026 B 1				-	- 1	-	12121	- - -	1	10  E
INC CAMPIE 3 CO BIOCK		1001	_	_	<del>-</del>	_	<u>-</u> -	_ _		141121
Inc sample 4 to Block	_	105	_ _ _	- -	<u> </u>	_	<u>-</u>	_		-
STILL Sample 6 CJ Block	_	1051	_ _ _	<u> </u>	_ _	_	_	- - -		=
SOLING SAMPLE 5 CU BLOCK	<u> </u>	1051	<u>-</u>	- -	_	_	- - -			
Still Sample 6 of plant Arm T	- : - :	1051	_ _ _	<u> </u>	- -	_	<u>-</u>	- - -		-
8511RC FTS Stepping	 	1021	 	- ·	_	_	- -	_		41   2
8511RC SEM Track Temp		1701	- : - :		<u> </u>	- -	_ _ _	<u>-</u>		41   2
1851 IRC IFEA Upper	 	707	 	- ·		_	_ _ _	_ _		41   2
851   RC IFEA LOWER Atmosphere		1001	 	 	<u>-</u> -	_	_	_		41   2
lux 1 Calibration	 	1001	 	 				_ _		41   2
RTD Mux 1 Calibration -		1021	 		 		<u>-</u> :			_
1851 RC RTD Mux 2 Calibration -		1021	 			<b>-</b> -	 	 		
8511RC RTD Mux 2	_	1021		- 			 	<u>-</u> -		-
851 RC RTD Mux 3 Calibration -	- -	1021	- - -				 	 	_	
851 RC RTD Mux 3	<u>-</u>	1021		- -			 	 		41121
851/RC RTD Mux 4 Calibration -	<u>-</u>	1021	_	_	_	<b>-</b>	- - - -			
Mux 4 Calibration -	<u>-</u>	1021	_ _ _	- -	_	_	- - -			
651 PC RID Mux 5 Calibration -	_	1021	_ _ _	_	_ _	-	· _	- - -		
18511BC BTD Mix 6 Calibration -		1051	_	_ _	_	_	_	_		
1851 IRC RTD Mux 6	 	1021	<u> </u>	 	_ _ _	-	<u>-</u>	<u>-</u>	_	41   2
RC RTD Mux 7 Calibration -	 	1001	 	 	- : - :	<del>-</del> ·	_ _ _	_ _ _	_	41   2
1		1021	 		 		<u> </u>	- : - :		_
851 RC RTD Mux 8 Calibration -	· -	1021		 	 	-	 	 		-
P51 RC RTD Mux 8 C	_	1021	- -				 	 		
3511RC Cold Guard Heater, Curren	_	1021	· –	- - –			 	 		41   2
36 851 RC Cold Guard	_	1021	- -				 	 		
37/851/RC Cold Main Primary Heater	_	1051	<u> </u>	· -	· -		 	 		17 14
238   851   RC Cold Main Primary Heater Volt	_ 	1051	<del>-</del>	_	- - -	_	 	 		41121
	-	-			-		-		-   -	-
000	3 4	4	4	5 - 5	- ഹ - ഹ	- v9 - v9			- r	<del></del> 0
	0 6	3 5	7 8	1 3	5 7	2 0	7	- ^	- α	0 0

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 38 of 38)

		Σ	DATA D	DESCRIPTION	MONICI	mmmmi	1/////
ENT C N	SE	SO OS O Y -	STABLI END	D IDATA VALUE	KEQ A  LUE! L!	CIRCISID	E   E
INC. TO CI DESCRIPTION	2 9	M FE		IT-	3 3	IDI IOINO.	_ 
	IO E		WDIBTIWDIBTIX	BTIYI	INIXICI	T  D	<u>a</u>
	<u> </u>	_	= -	l a l	INICIO	121 EI	<u> </u>
· <del></del>	X		<u>-</u>	<u>=</u>	TIPIE	-	D  E
123918511RC Cold Main Red Heater Current	  -  -	1021 1 1			- - - -	- - -	141121
1851 RC Cold Main Red Heater	_	1021 1 1	- -	<u>-</u>	<del>-</del> - -	- - -	141   2
8511RC Hot Boost Heater Current	_	1021 1 1	<u>-</u> -	<u>-</u>	- - -	_ _	
851 RC	_	1021 1 1	- -	_	- - - -	- -	_
243 851 RC Hot Guard Heater Current	_	1021 1 1 1	<u>-</u>	<u>-</u>		_ _	
244 851 RC Hot Guard Heater Voltage	_	1021 1 1	- -	<u>-</u>	_ _ _ _		_
	_	1021 1 1	- -		_ ·		
246 851 RC Hot Main Primary Heater Volt	_	1021 1 1	<u>-</u>	_ ·	_ ·	_ ·	
247 851 RC Hot Main Red Heater Current	_	1021 1 1	- -	<u>-</u>	_ ·	_ ·	-
248 851 RC Hot Main Red Heater Voltage	_	1021 1 1	- -	<u>-</u>	_ _ _		_
249 851 RC Stepping Motor Phase A Cur	_	1021 1 1	- -	<u>-</u>	_	_ _ _	_
	_	1051 1 1	- -	<u>-</u>		_ ·	<b>-</b> ·
Motor Phase	_	1021 1 1	<u>-</u> -	<u>-</u>	- - -	- -	_
	<u>-</u>	1021 1 1 1	- -	<u>-</u>	- - -	_ _ _	_
Indexing CAM Ro	_	1021 1 1 1	- -	<u>-</u>	- - -	_ _ _	_
	_	1021 1 1	- -	<u>-</u>	- - -	_ _ _	_
255 851 RC IFEA Lower Humidity	_	1021 1 1	- -	<u>-</u>	_ _ _ _	_	41   2
256 851 RC Rapid Translation Motor RPM	_	1021 1 1	- -	<del>-</del>	- - -	- -	_
851 JRC	_	1021 1 1	- -	<u>-</u>	- - -	_ _	41 2
258 851 RC IFEA Upper Humidity	_	1021 1 1	- -		_ _ _	_	_
259 851 RC Experiment Main Bus Current	_	1021 1 1 1	- -	<u>-</u>	- - -	_ _	_
260 851 RC IFEA Absolute Pressure 2	_	1021 1 1	_ _ _	<u>-</u>	- - -	_ _ _	_
261 851 RC SMS Board Velocity Reading	_	1021 1 1 1	<u>-</u>	<u>-</u>	- - -	- -	-
851 J RC	_	1021 1 1	_ _	<u>-</u>	<u>-</u> - -	- - -	_
263 851 Process Elapsed Time - Seconds	_	1021 1 1 1	_ _	_	- - -	- -	_
264 851 Go/NoGo Error Override	_	1021 1 1 1	<u> </u>	<u>-</u>	- - -	- - -	_
265 851 CGF Sytstem State	_	1021   1	_	<u>-</u>	<u>-</u> - -	_ _	_
266 851 Auto Pressure Ctl	<u>-</u>	1021 1 1 1	<u>-</u>	<u>-</u> -	- - -	 	41   2
			- -	-	  -  -	_	_
	. 4	4 4	. 5	. S	9 9 9	11, 1	7 8
		7 7 8		5 7	5 6 7	1 2 5	0 8
3 6 /		י ר		-	>	;	

NIC	MONITOR	NITOR VALUES   MI		1////1		1////1	1 T 0C	1////1
IT MIR ICNT	-	LOWER  G	MESSAGE	  ERROR	MESSAGE	ERROR	- N 1 U0   R T M TU 3PI	<u> </u>
BIR	UPPER	LIMIT/   (	(HIGH/SINGLE)	MSG. I	LOW	IMSG.	IR EI NI ADI	_
<u>=</u>	LIMIT	EXPT'D  C					-Ir ILLICG	P  B
_	_	STATE  L		I N I		<u>N</u>	_	I  L
OR -	-	isi -		IR 10 -		IR 10	<u>၁</u>	13 O
_ z_ _		_		- · ·		<u>ы</u>	IK IT "R I	<u>-</u> -
1207   106   001	1670-	-128 1 нІ	WATER TEMP	1411141		41	300 10 CGF	41 4
1208   106   001	1770-	-128 1 HI	HUMIDITY LWR	141 16		1411	300   10   CGF	41 4
1209   106   001	1770-	-128 1 НІ	HUMIDITY UPR	41 18		41	300   10   CGF	41 4
1210 106 001	100-	-128 1 НІ	ATMOS TEMP	41   1A		111	1300 1 10 I MAN	41 4
1   106	-073	-128 1 HI	CLD	41 1C		41	300   10   MAN	41 4
106	-073	-128 1 НІ	HOT			41	_	41 4
_	1600-	1 -073 1 HI				14112	21   300   10   CGF	41 4
_	1600-	1073 11 HI	IFEA PRES 2	41 22 LO I	IFEA PRES 2	41   2	23   300   10   CGF	41 4
	+105	-128 1 НІ	MAIN CURRENT	111		41	300   10   CGF	41 4
	1920+	+018 1 HI	MAIN VOLTAGE	<u>ន</u>	MAIN VOLTAGE!	41	27   300   10   CGF	41 4
	_	1111TO	WATER FLOW	41 28		41	300   05   CGF	41 4
$\overline{}$		1 11 110	_	41   2A		41	300   05   CGF	41 4
	-	1   1   NO		41		1411	300   05   CGE	141141
		111 NO	AVIONICS	41 2E		41	1300   05   CGF	14114
1239 106 001	_	1 1 1 NO	AVIONICS AIR	41   30		141	1300   05   CGF	141141
1240110610011	_	1111NO	<	41   32		41	13001051CGF	141141
1265 106 001	<b>-</b>			41 34		41	1300   05   MAN	41 4
1266110610011	_	I OIIIWTR	R OUT BYPASS	41 36		41	1300   05   MAN	41 4
1267110610011	_	I IIIWTR	R IN BYPASS	41 38		41	1300   05   MAN	41 4
1268110610011	_	0 1 WTR	'R IN BYPASS	41 3A		41	1300 105 1 MAN	41   4
1287110610011	_	1 1 EX	EXTRM TRVL LIM	41 3C		41	300   05   FTS	41 4
1288 106 001	_	0 1 EX	EXTRM TRVL LIM	41   3E		41	300   05   FTS	41 4
1319 106 001	_	I 0 1 EXP	TE BUS PWR OFF	1411401		41	13001051CGF	41 4
132011061001	_	1 1 EXP	P BUS PWR OFF	1411421		41	13001051CGF	41 4
		-	1	- -	• • • • • • • • • • • • • • • • • • •	<u> </u>		
0	1	2 2 2		4 4 4		9	4 9 9 9	7 8
3 6 9	7	5 6 7		3 5 6		7	4 7 9 2	0 6

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 1 of 20)

NICT! O AY!  LP!  TE!	CALIBRAT	TON COEFFIC	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS			E IT
0 <b>V</b>	¥	. A2	A3	A4			
8501PC1+00000000+001	+0000000+001+1000000+011+0000000+011+1000000						i — — -
	001+1000000+011						
	100   +1000000 +01						41161
138   850   PC   +0000000 +00   139   850   PC   +000000000 +00	10000000+001		. –	- <del></del> -	. <b>_</b> .		
C1+00000000+	140 850 PC +0000000+00 +1000000+01				<del>-</del> -		4116
+0000000+12	142 850 PC +000000+00 +1000000+01						4116
c +0000000+1c	143 850 PC +0000000+00 +1000000+01 144 850 PC +00000004+00 +1000000+01						
C +00000000+  C +00000000+	850 PC +0000000+00 +1000000+01 850 PC +0000000+00 +1000000+01					- <del>-</del> ·	14116
850 (PC   +00000000+	850 [PC] +00000000 +00 [ +1000000 +0]						14116
	+000000+100+100000+01						14116
850 PC +000000000 850 PC +000000000+	850 PC +0000000+00 +1000000+01 850 PC +0000000+00 +1000000+01						
850 PC I +00000000+	+0000000+001+1000000+01						14116
8501PC1+000000004 8501PC1+000000000	850 FC +0000000+00 +100000401 850 FC +0000000+00 +1000000+01				-	-	-
C1+0000000+	8501PC1+0000000+001+1000000+01	-					141   6
	850   PC   +0000000400   +1000000+01 850   PC   +00000000+00   +1000000+01					-	_
C1+00000004	850   PC   +0000000+00   +1000000+01		_	_	_		
	+0000000+001+10000000+01						14116
8501PC1+00000000	+0000000+001+10000000+01		- <del>-</del>	- <del>-</del>	_	· <del>-</del> ·	_
	850 [PC] +0000000+001+1000000+01 850 [PC] +0000000+001+1000000+01	= =	<del>-</del>		<b>-</b> -		14116
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	-				! ! ! !	-	
	1 2		<b>4</b>	9 (		٠ ،	~ 0
	6 8		0	7		~	ת

TABLE 1.74. POIC DISPLAY REQUIREMENTS (Sheet 2 of 20)

	20 8 8	01AY    I.P     IE		CALIBRAT	ION COEFFIC	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	R SEGMENTS		 i m × s
850   PC   +0000000+001   +1000000+011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011   +1011			<b>V</b>		A2	¥3			 
850   PC   +0000000+00   +100000+01   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11			00+000000	+1000000+01    +1000000+01    +1000000+01    +1000000+01			-	-	
#\$50  PC   40000000+001   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411		PC   +0(	00+000000	+1000000+01    +1000000+01    +1000000+01    +1000000+01			· <b>-</b>	. <b>-</b>	 
850   PC   +0000000+00   +1000000+01   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11   +11		PC   +0    PC   +0    PC   +0    PC   +0    PC   +0	00+000000	+1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01					  
1			00+000000 00+000000 00+000000 00+000000 00+000000	+1000000+01    +10000000+01    +10000000+01    +10000000+01    +10000000+01    +10000000+01    +10000000+01    +1000000+01					
	-	-0-	8	2 2 6	- 4	5 - 1	1 1 1 1 1 1 1 1 1	6	 

TABLE 1.74. POIC DISPLAY REQUIREMENT'S (Sheet 3 of 20)

## A0	NIC NICTI UIO OIAYI MIR ILPI BIR IIEI		CALIBRATI	CALIBRATION COEFFICIENTS/LINEAR		SEGMENTS		E T
41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    41    40000000+001    4200000-01    41    41    41    40000000+001    4200000-01    41    41    41    40000000+001    4200000-01    41    41    41    40000000+001    4200000-01    41    41    41    40000000+001    4200000-01    41    41    41    40000000+001    4200000-01    41    41    41    40000000+001    42    42    42    42    42    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43    43	H H H H H H H	90 V	. A1	A2	<b>A</b> 3	A4	A S S	_
	196   850   PC   +00   197   850   PC   +00   198   850   PC   +00   199   850   PC   +00   200   850   PC   +00   201   850   PC   +00   202   850   PC   +00   203   850   PC   +00   204   850   PC   +00   205   850   PC   +00   207   850   PC   +00   210   850   PC   +00   211   850   PC   +00   212   850   PC   +00   213   850   PC   +00   214   850   PC   +00   215   850   PC   +00   216   850   PC   +00   217   850   PC   +00   218   850   PC   +00   219   850   PC   +00   211   850   PC   +00   212   850   PC   +00   213   850   PC   +00   214   850   PC   -2   221   850   PC   -2   222   850   PC   -2   222   850   PC   -2   222   850   PC   -2   222   850   PC   -2   222   850   PC   -2   222   850   PC   -2   222   850   PC   -2   225   850   PC   -2   226   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2   227   850   PC   -2	000000+001 000000+001 000000+001 000000+001 000000+001 000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001 0000000+001	+5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +5000000-01 +3600000-01 +3600000-01 +3600000-01 +3600000-01 +3600000-01 +3600000-01 +360000-01 +360000-01 +360000-01 +360000-01 +360000-01 +360000-01 +360000-01 +360000-01 +360000-01 +360000-01 +36000-01 +36000-01 +36000-01 +32000-00 +32000-00 +32000-00 +32000-00 +32000-00 +32000-00 +32000-00 +32000-00	   +9104500-03    +9104500-03    +1211300-04    +1211300-04    +1211300-04    +1211300-04    +1211300-04	12442500-06 1+2442500-06 1-4356500-09 1-4356500-09 1-4356500-09 1-4356500-09 1-4356500-09 1-4356500-09 1-4356500-09	-5706400-01	11394700-02	141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141   6   141
	0 0	<u> </u>	7	r 0	· -	2	m	6

O E E	NICTI OIAYI ILPI IEI		CALIBRAT	CALIBRATION COEFFICIENTS/LINEAR	ENTS/LINEAR	SEGMENTS		<b>:</b>
<u> </u>	N C I I B B B	V V	¥	A2	γ3	¥	A S	
227   85 228   85 229   85 231   86 233   86 234   86 235   86 236   86 237   86 238   86	850 PCI 850 PCI 850 PCI 850 PCI 850 PCI 850 PCI 850 PCI 850 PCI 850 PCI		+1381000+031 +1381000+031 +1381000+031 +1381000+031 +1381000+031 +1381000+031 +1381000+031 +2705600+021 +2705600+021 +2705600+021	-8505200+01 -8505200+01 -8505200+011 -8505200+011 -8505200+011 -8505200+011 -8505200+011 -1504300+001 -1504300+001 -1504300+001	+9220100+001 +9220100+001 +9220100+001 +9220100+001 +9220100+001 +9220100+001 +1159800-021 +1159800-021 +1159800-021 +1159800-021	-8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -1504300+00 +1159800-02 +4582500-04 -5337600-06 -1504300+00 +1159800-02 +4582500-04 -5337600-06 -1504300+00 +1159800-02 +4582500-04 -5337600-06	+1394700-02    +1394700-02    +1394700-02    +1394700-02    +1394700-02    +1394700-02    +1394700-02    -5337600-06    -5337600-06    -5337600-06    -5337600-06	4 4 1 1 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850 PC   850	-1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02 -1089200+02	1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+02 1+2705600+03 1+1381000+03 1+1381000+03		-1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021 -1504300+001+1159800-021	4582500-04 4582500-04 4582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04 44582500-04	-5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06 -5337600-06	
-0"	- 0 -	— <b>~</b> ∞	- 2 6	-40	- 5 -	- 9 ~	- r ~	
·		,	•	,	•	J	1	`

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 5 of 20)

////     		41161 41161 41161 41161 41161 41161 41161 41161 41161 41161 41161 41161 41161 41161	_ :	20	0 6
	A5	394700-021 394700-021 394700-021		_	er.
SEGMENTS	*	5706400-011+11 5706400-011+11 5706400-011+11	_	9	2
	<b>A</b> 33	-8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +92201000+00 -5706400-01 +1394700-02 -8505200+01 +92201000+00 -5706400-01 +1394700-02 -8505200+01 +92201000+00 -5706400-01 +1394700-02 -8505200+01 +92201000+00 -5706400-01 +1394700-02 -8505200+01 +92201000+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-01 +1394700-02 -8505200+01 +9220100+00 -5706400-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09  -1211300-04 -4356500-09	-	5	-
CALIBRATION COEFFICIENTS/LINEAR	A2	1493200+02 +1381000+03 -8505200+01 +9220100+00  1493200+02 +1381000+03 -8505200+01 +9220100+00  1493200+02 +1381000+03 -8505200+01 +9220100+00  140000000+00 +1743900-02  14000000+00 +5086300-02  14000000+00 +1743900-02  14000000+00 +1364100+00  14000000+00 +1364100+00  14000000+00 +136400-02  14000000+00 +1953600-02  14000000+00 +1953600-02  14000000+00 +1953600-01  14000000+00 +1953600-02  14000000+00 +1953600-02  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-02  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  14000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  150000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  15000000+00 +1953600-01  150000000+00 +1953600-01  1500000000+00 +1953000+00 +1511300-04 -4356500-09 1500000000000000000000000000000000000	-	4	0
CALIBRAT	A1	850   PC   +1493200+02   +1381000+03   -850   PC   +00000000+00   +5086300-02   -850   PC   +0000000+00   +5086300-02   -850   PC   +0000000+00   +1743900-02   -850   PC   +0000000+00   +176297900+00   -850   PC   +0000000+00   +17326000-02   -850   PC   +00000000+00   +17326000-02   -850   PC   +00000000+00   +17326000-02   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +00000000+00   +1953600-01   -850   PC   +0000000+00   +1953600-01   -850   PC   +0000000+00   +1953600-01   -850   PC   +0000000+00   +1953600-01   -850   PC   +2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -2414600+03   +2297900+00   -241460	-	2	6
	ν γ		-	_	8
NICTI OIAYI ILPI IEI	N T T I O N	850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC   4850 PC	-	0 0	5 7
IE NIC	 	258  8  8  1260   8  1260   8  1260   8  1260   8  1260   8  1260   8  1260   8  1260   8  1260   8  1260   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  1275   8  127	-	0	σ

N   N   N   N   N   N   N   N   N   N	A4 00-091 00-091 00-091 00-091 00-091	P S	1
	160-00 160-00 160-00 160-00 160-00		
299   850   PC   +0000000+00   +1000000+01			

TABLE 1.74. POIC DISPLAY REQUIREMENTS (Sheet 7 of 20)

NICTI OLAYI ILPI ILEI	CALIBRAT	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	IENTS/LINEA	R SEGMENTS			E TI
<b>A</b> 0	I V	A2				A5	
850   PC   +9760000+03	31+2442000+00	· · · · · · · · · · · · · · · · · · ·					
850 PC +6810000+02  850 PC +6810000+02							141161
850   PC   +9760000+03	3 +2442000+00			. —			41161
0+0000916+1	850   PC   +9760000+03   +2442000+00						
326 850 PC +976000110. 327 850 PC +9760000+0	326 850 PC +9/60000+03 +2442000+00	- <del>-</del>					41 6
PC1+9760000+0	+9760000+031+2442000+00				-	_	
850 PC +6810000+0	+6810000+021+2442000-01	<del>.</del> =					14116
850 [PC] +0000000+0	850   PC   +0000000+00   +1000000+01	= =					14116
0+0000000+1	850 PC +0000000+00 +250000+00						
0+00000000+1:	850 PC +000000400 +100000401 850 PC +0000000400 +3125000+00	10					14116
0+0000000+1	850   PC   +0000000+00   +250000+00	10					
33718501PC1+0000000000+0	+0000000+00 +1000000+01	10					14116
850 PC 1+0000000+0	+0000000+001+2500000+00	10					
	+000000+001+10000000+01	110		. <u>-</u>	_		14116
PC   +000000000 PC	+000000112500000+000+000	: 0	_				14116
	+00000000000000+	- 4					14116
344   850   PC   +00000000+f	+0000001+100+000000+			. –	_		_
c1+0000000+1c	850   PC   +0000000+00   +1000000+01			. –	_		14116
C1+00000000000	850 PC +0000000+00 +1000000+01			_	_		1411
850   PC   +0000000+000   850   860	10+1000000+01	111	_				1411
+0000000+12	850   PC   +0000000 +00   +1000000 +01	111					1411
+0000000+12	B50 PC +000000+00 +1000000+01	)1.	-		- !		-
	_	_		<u> </u>	<u> </u>	1	١,
	1	2	4	n -	۰	С	6
	8	6	0	-	7	ı	

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 8 of 20)

E NIC NICTI N UIO OLAYI T MIR ILPI R BIR ILEI		CAL IBRAT	TION COEFFIC	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS		X	T - T
	<b>y</b>	V V	A2	A3	ν		4 - 1	
2							 	- <del>-</del>
3521850 [PC]	850   PC   +0000000+00		; ; ; ; ; ; ; ;		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		41	41161
		+000000+001+1000000+011						116
	+0000000 +00  +10000000+01   +0000000+00  +1000000+01	+1000000+01   +1000000+01					-	
35818501PC	8501PC1+0000000+001+1000000+01	1+1000000+011						9   0
	850   PC   +0000000+00   +1000000+01	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					1 141	_
	850   PC   +0000000 +00   +1000000 +01	+1000000+011	_		_			1   6
364   850   PC   364   850   PC	850!PC  +0000000+00  +1000000+01 850!PC  +0000000+00  +1000000+01	+1000000+011	-		_		141	
	850   PC   +0000000+00   +1000000+01	+1000000+011		_			41	191
366/850/PC/ 369/850/PC/	1+0000000+001+10000000+01	+1000000+011		-	-			
		+1000000+011		_				1911
3/1/850/PC/ 3/2/850/PC/	1+0000000+001+1000000+01	+1000000+011	-	_	-		- 41	
	850 PPC   +0000000+00   +1000000 +01	+1000000+011	<del></del> -				141	_
	8501PC1+000000+001+1000000+01	+1000000+011						9 9
37818501PC1	850   PC   +0000000+00   +1000000+01	+1000000+011		-	-			
37918501PC	850 [PC   +0000000 +00   +1000000 +01	+1000000+011					141	_
3018501PC1	380 850 PC +0000000+00 +1000000+01	+1000000+011	-					9
	100+0000000+	+1000000+011	_	-	_			
830 PC		+1000000+011	_	-	_		- 141	
850 PC	+0000001+1000000+01	+1000000+011		_	_		- 141	_
850 PC		+1000000101			_		41	191
38818501PC	850   PC   +0000000+00   +1000000+01	+1000000+011					14]	_
	850   PC   +0000000+00   +1000000+01	+1000000+011	-	_			= =	41   6
39018501PC1	+0000000+001+1000000+01	+1000000+01	-					9
- (	-	_	-	-			1 -	-
0 0 0	-	2	4	· S	<b>ى</b> -	. ~	- !-	- a
3 5 7	æ	6	0	-	. 2	. ~	- 3	ه د
					,	,	•	>

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 9 of 20)

A4 A5 ID IB  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1 B1  A1
5 6 . 7
5 6 . 1
1 2 4

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 10 of 20)

A A A A A A A A A A A A A A A A A A A	A	
A4 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
A	7	1
	_ <del>- •</del>	
	<b>-</b> ♥	+1000000+011
	- <del></del>	+1000000+011
	_ <del></del>	+0000000+001+1000000+011
	- <del></del>	+0000000+00 +10000000+01
	- <del></del>	+1000000+011
	<b>-</b> ₹	+1000000+011
	- <del>-</del>	+1000000+011
	<b>-</b> <del>•</del>	+1000000+01
	- <del>-</del>	+1000000+011
	- <del>-</del>	+1000000+011
	- <del>-</del>	850   PC   +0000000 +00   +1000000 +01
	- <del>-</del>	850 [PC   +0000000+00   +1000000+01   850 [PC   +0000000+00   +1000000+01
	- 🗢	+0000000+001+1000000+011
	- 🗢	850 PC ( +0000000 +00   +1000000 +01 ) 850 PC ( +0000000 +00   +10000000 +01 )
	- 4	+1000000+011
	- 5	+10000000+011
	- 5	850 PC +0000000+00 +10000000+01  850 PC +0000000+00 +1000000+01
	- &	850   PC   +0000000+00   +1000000+01
	- 4	461 850 PC +0000000+00 +1000000+01
	- 4	+0000000+001+1000000+011
	- 4	850 PC +0000000+00 +1000000+01
	- 4	+1000000+01+
	- 4	50 PC +0000000+00 +1000000+01
		2
4 5 6 7 78	0	σ

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 11 of 20)

N	0 0 N N N N N N N N N N N N N N N N N N		CALIBRA	TION COEFF	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	AR SEGMENTS		, ; ; 1		E   T   E   T   E   E   E   E   E   E
## ## ## ## ## ## ## ## ## ## ## ## ##	× R R R R R R R R R R R R R R R R R R R	<u> </u> 		<b>A</b> 2				A5		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
850 [PC   40000000+00   41000000+01   810 [PC   40000000+00   410000000+01   820 [PC   40000000+00   410000000+01   820 [PC   400000000+00   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   410000000+01   4100000000+01   410000000+01   410000000+01   410000000+01   410000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   4100000000+01   41000000000+01   41000000000+01   410000000000+01   4100000000000+01   41000000000+01   4100000000000000+01   41000000000000000000000000000000000	47318501PC	00000000+10	001+1000000+01 001+10000000+01							41   6     41   6     41   6
850   PC   10000000+00   11000000+01   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116   14116	47518501P0 47618501P0	)+00000000+15	001+1000000+01							
850   PC   10000000+001   1000000+01   14118 850   PC   100000000+001   1000000+01   14118 850   PC   100000000+001   10000000+01   14118 850   PC   100000000+001   1000000+01   14118 850   PC   100000000+001   1000000+01   14118 850   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   100000000+001   1000000+01   14118 851   PC   1000000000+001   1000000+01   14118 851   PC   100000000000+001   1000000+01   14118 851   PC   10000000000+001   1000000+01   14118 851   PC   1000000000000+001   10000000+01   14118 851   PC   10000000000000+001   100000000+01   14118 851   PC   100000000000000000000000000000000000	477   850   P	)+0000000+15	001+1000000+0		. – -					
850   PC   +0000000+00   +1000000+01   850   PC   +0000000+00   +10000000+01   850   PC   +0000000+00   +10000000+01   850   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   851   PC   +00000000+00   +10000000+01   +10000000+01   +10000000+00   +10000000+01   +10000000+00   +10000000+01   +10000000+00   +10000000+01   +10000000+00   +10000000+01   +10000000+00   +10000000+01   +10000000+00   +10000000+01   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +100000000+00   +100000000+00   +10000000+00   +100000000+00   +100000000+00   +100000000+00   +100000000+00   +100000000+00   +100000000+00   +100000000	47918501P 48018501P	+00000000+12c	001+1000000+0							
850 PC +0000000+00 +1000000+01  850 PC +0000000+00 +1000000+01  850 PC +0000000+00 +1000000+01  850 PC +0000000+00 +1000000+01  850 PC +0000000+00 +1000000+01  850 PC +0000000+00 +10000000+01  850 PC +0000000+00 +10000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000000+00 +10000000+01  851 PC +0000000000+00 +10000000+01  851 PC +0000000000000+01  851 PC +0000000000+01  851 PC +0000000000+01  851 PC +00000000000000+01  851		+0000000+10c								
850   PC   +0000000+001   1000000+01   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411		+0000000+1 oc	001+1000000+0							
#\$50 PC +0000000+00 +1000000+01  #\$51 PC +0000000+00 +1000000+01  #\$51 PC +00000000+00 +1000000+01  #\$51 PC +0000000+00  +10000000+01  #\$51 PC +000000000+00 +10000000+01  #\$51 PC +00000000000+00 +100000000+01  #\$51 PC +000000000000000+01  #\$51 PC +00000000000000000000000000000000000		PC   +00000000+	001+10000000+0	:==	. <u></u>					14116
#   #   #   #   #   #   #   #   #   #	850     850		001+1000000+0	; <del>,</del> ;						
#51 PC +0000000+00 +1000000+01    #1    #1    #51 PC +0000000+00 +1000000+01    #1    #1    #51 PC +0000000+00 +1000000+01    #1    #1    #51 PC +0000000+00 +1000000+01    #1    #1    #1    #51 PC +0000000+00 +1000000+01    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1    #1	851		001+10000000+0	11		. — -				14116
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +00000000000+00 +10000000+01  851 PC +00000000000+00 +1000000000+01  851 PC +0000000000000000000+01  851 PC +00000000000000000000000000000000000	851		1001+1000000+0		<b>-</b> -					14116
#51 PC +0000000+00 +1000000+01	9511		0001+10000000+0	11	- <del>-</del>	. <del></del> -				14116
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +00000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +000000000000+00 +1000000+01  851 PC +000000000000+00 +10000000+01  851 PC +00000000000+00 +10000000+01  851 PC +0000000000000+00 +10000000+01  851 PC +0000000000000+00 +10000000+01  851 PC +00000000000+00 +10000000+01  851 PC +0000000000000+00 +10000000+01  851 PC +0000000000000000+00 +10000000+01  851 PC +0000000000000000+01  851 PC +0000000000000000000+01  851 PC +0000000000000+00 +100000000+01  851 PC +00000000000000000+01  851 PC +00000000000000000000000+01  851 PC +000000000000000000000+01  851 PC +00000000000000000000000000000000000		PC   +00000000	+001+1000000+0	21.					. <b>–</b>	_
851   PC   +0000000+00   +1000000+01	100718511	PC   +000000000	,001+1000000; ,001+1000000;	11		_				14116
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01	100918311	PC 1 +00000000	_	011						_
851 PC +0000000+1000000+01  851 PC +0000000+1000000+01  851 PC +0000000+00 +1000000+01	101018511	PC1+0000000	_	011					_	
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  1	8511	PC	+001+10000000+1	011					<u>-</u>	
8511PC1+0000000+001+1000000+011	851		10000001+100+	011	_	_				14116
1+0000000+10000000000000000000000000000	8511	- L D	+00000001+100+	011	<u>-</u> -					_
	101518511	- 1	+001+1000000+	110			-	1 1 1 1 1 1 1	-	-
	<del>-</del>	_	_	_ «	_ <	<b>-</b> .	و.		,	.~
	0	0	_	, 2	<b>.</b> c	, –	2		~	6

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 12 of 20)

E NIC N UIO O T MIR MIR SIR	NICT] 0 AY]  LP]  TE]	CALIBRAT	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	ENTS/LINEAR	SEGMENTS			///     E  T
	I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A 0 I A	¥	<b>A</b> 2	A3	P44	A5		
016   851   PC   017   851   PC   018   851   PC   018   851   PC   019   851   PC   019   851   PC	PC   PC   PC	+0000000+001+1000000+011 +0000000+001+1000000+011 +0000000+001+1000000+011 +0000000+001+1000000+011	-				-	
020(851) 021(851) 022(851) 023(851)	PC   PC   PC	+0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +100000+01						41   6     41   6     41   6     41   6
025 851  025 851  026 851  027 851		+0000000+01+1000000+01 +0000000+00+1000000+01 +0000000+00+1000000+01 +0000000+00+1000000+01 +0000000+00+1000000+01						
028 85  PC  029 85  PC  030 85  PC  031 85  PC  032 85  PC	028 851 PC +0000000+00 +1000000+01 029 851 PC +0000000+00 +1000000+01 030 851 PC +0000000+00 +1000000+01 031 851 PC +0000000+00 +1000000+01 031 851 PC +0000000+00 +1000000+01	01+1000000+011 01+10000000+011 01+10000000+011 01+1000000+011	. = = = =					41   6     41   6     41   6       41   6
851 851 851 851 851 851 851	PC   PC   PC   PC   PC   PC   PC   PC	+0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01					:	
1040   851   PC   1041   851   PC   1042   851   PC   1043   851   PC   1044   851   PC   1045   851   PC	PC   PC   PC   PC	+0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01						41161 41161 41161 41161 41161
3 0 0	1 0 1 7 8	- 7 6	-40	- 5 -	- 9	;	3	1 8 7 9 0 6

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 13 of 20)

E NIC NICTI N UIO OLAYI T MIR ILPI R BIR IIEI		CALIBRA'	LION COEFF]	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	R SEGMENTS	1		E   T    X   A    P   B
K R R R C C C C C C C C C C C C C C C C	<b>V</b>	A1			A	A		
- N-		N						141161
047 851 PC 4  048 851 PC 4	00+0000000	10+0000001+100+0000000+	:==				- <del>-</del> -	
1049/851/PC14	00+00000000+	049 85  PC +000000400  4100000401 040 85  PC +0000000+00  41000000+01	==					141161
1051 1851 IPC I	30+0000000+	051 851 PC +0000000+1000000+01	_ :					
105218511PC1	)0+0000000+ )0+0000000+	851 PC +0000000+00 +1000000+01			_			141161
054   851   PC	+00000000+	05418511PC1+0000000+001+1000000+01	1 1				- <del></del>	-
1055 851 PC	0000000+	055 851 PC +0000000+00 +1000000+01	= =			-		141161
10561851 PC1	0000000+	851   PC   +0000000 +00   +1000000 +01						
1058 1851 [PC]	0+0000000+	851   PC   +0000000 +00   +1000000+01	11	<del></del> -	<u> </u>		. –	
1059   851   PC	0+0000000+	05918511PC1+0000000+001+1000000+01			- <b>-</b>			141   6
851	0+0000000+	851   PC   +0000000 +00   +100000 +0		. <b></b>				
106118311FC1	0+0000000+	831 PC   +0000000+001+1000000+01	111				-	14116
1063   851   PC	851 [PC   +0000000+001	101+1000000+01	11				_	
	100+0000000+1	101+1000000+01			. –	_	_	
	0+0000000+1	+0000000+10011000000+11	-11		_	_		14116
8511	0+0000000+1	PC   +0000001 +100   +1000000 : 01	311	_	_			
106718511PC1	5+0000000+1 3+0000000+1	10+0000001+100+000000+	110	_				
100		10+0000001+10000000+01	011	_			· <del>-</del>	14116
102018511PC	)+0000000+1	+00000001+100+000000+01	011			_	_	_
107118511PC	)+0000000+1	+00000001+100+000+01	011				<u>•</u>	_
107218511PC	1+0000000+	07218511PC1+0000000+001+1000000+01	011			_	-	141161
107318511PC	1+0000000+1	PC +0000000+00 +10000000+01	011	<b>-</b> -		_	-	14116
1074   851   PC	+0000000+1	074 851 PC +0000000+100 +1000000+01	011			-		_
107518511PC	+0000000+1	07518511PC1+00000000+1001+10000000+01	011		. <b></b>	-	_	
107618511PC1	+0000000+1:	07618511PC1+0000000+001+1000000+01	011	. <b>–</b>	-	- 1	- !	14110
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-		_ \	-:	
- °			. ~	4	c.	، و	- ~	. 6
) r ) v		- 8	6	0		7	,	
,								

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 14 of 20)

IE NIC NICTI IN UIO OIAYI IT MIR ILPI IR BIR IIEI		CALIBRAT	ION COEFFIC	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS	; ; ; ; ; ; ;	////
28	Α0	Z	A2	A3	¥	AS	<u> </u>
851   PC     851   PC     851   PC     851   PC     851   PC	+000000+00 +1000000+01 +0000000+00 +1000000+01 +0000000+00 +1000000+01 +0000000+00 +1000000+01 +0000000+00 +1000000+01 +0000000+00 +1000000+01 +0000000+00 +1000000+01	+1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01		-			
108418511PC - 108518511PC - 108618511PC - 108718511PC -	00+000000000000000000000000000000000000	+1000000+01    +1000000+01    +10000000+01    +10000000+01					41 6   41 6   41 6   41 6
1089 851 PC   1090 851 PC   1091 851 PC   1092 851 PC	PC   +0000000+00   +1000000+01   PC   +0000000+00   +1000000+00   +1000000+00   PC   +0000000+00   +10000000+01   PC   +0000000+00   +10000000+00   +10000000+00   PC   +0000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +1000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +10000000+00   +1000000+00   +10000000+00   +10000000+00   +10000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000000+00   +1000	+1000000+01  +1000000+01  +1000000+01  +1000000+01					4116 4116 4116 4116
851 PC 851 PC 851 PC 851 PC 851 PC	PC   +0000000+00   +1000000+01 PC   +00000000+00   +1000000+01 PC   +0000000+00   +1000000+01 PC   +0000000+00   +1000000+01 PC   +0000000+00   +1000000+01 PC   +0000000+00   +1000000+01	*1000000+01  *1000000+01  *1000000+01  *1000000+01  *1000000+01					41 6   41 6   41 6   41 6
100   85   PC   +	099 851 PC +0000000+00 +1000000+00  100 851 PC +0000000+00 +1000000+00  101 851 PC +0000000+00 +1000000+00  102 851 PC +0000000+00 +1000000+00  103 851 PC +0000000+00 +1000000+00  103 851 PC +0000000+00 +1000000+00  105 851 PC +0000000+00 +1000000+00  105 851 PC +0000000+00 +1000000+00  105 851 PC +0000000+00 +1000000+00  106 851 PC +0000000+00 +1000000+00	+1000000+01    +1000000+01    +1000000+01    +1000000+01    +1000000+01    +1000000+01    +1000000+01    +1000000+01	<b></b>				4116 4116 4116 4116 4116 4116
0 0 0	8	110400001	0	- !	6 6	3	

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 15 of 20)

		O & &	N CT  0 AY   LP   IE		CALIBRAT	ION COEFFIC	CALIBRATION COEFICIENTS/LINEAR	SEGMENTS			
#\$51   PCC   +000000004-00   + 100000004-01   #\$51   PCC   +000000004-00   + 100000004-01   #\$51   PCC   +000000004-00   + 100000004-01   #\$51   PCC   +0000000004-00   + 100000004-01   #\$51   PCC   +000000004-00   + 100000004-01   #\$51   PCC   +000000004-00   + 100000004-01   #\$51   PCC   +000000004-00   + 10000004-01   #\$51   PCC   +000000004-00   + 10000004-01   #\$51   PCC   +000000004-00   + 10000004-01   #\$51   PCC   +00000004-00   + 10000004-01   #\$51   PCC   +00000004-00   + 10000004-01   #\$51   PCC   +00000004-00   + 10000004-01   #\$51   PCC   +000000004-00   + 10000004-01   #\$51   PCC   +000	#\$21   PCC   +00000000+001   10000000+01   1   1   1   1   1   1   1   1   1		A T T T S	<b>A</b> 0	I V	A2		A 4	A5		
85.1 PC   10000000+00   +1000000+01	85.1 PCC   +00000000+001   +1000000+01	1091851		00+000000	1+1000000+011						i
85.1 PC   +0000000+001   +1000000+01   85.1 PC   +0000000+001   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +100000000+01   +10000000+01   +100000000+01   +10000000+01   +100000000+01   +10000000+01   +10000000+01   +100000000+01   +1000000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +10000000000	### 15.1   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.2   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   ### 15.3   #### 15.3   #### 15.3   #### 15.3   #### 15.3   #### 15		PC I	00+000000	1+1000000+011						14116
851 PC   +0000000+00   +1000000+01	851 PC   40000000+00   41000000+01   1   1   1   1   1   1   1   1   1	112   851	2 2	00+000000	1+1000000+01					_	141
85.1 PC   +00000000+001   +1000000+01	85.1 PC   +00000000+001   +1000000+01	114   851	22	00+0000000							41
85.1 PC   +00000000+00   +10000000+01	85.1 PC   +0000000+00   +1000000+01	115 851 116 851	I PC 1+0	000000000000000000000000000000000000000			. <del></del> .				141
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +0000000+00 +1000000+01	851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +0000000000+00 +10000000+01  851 PC +000000000+00 +10000000+00 +1	117   851	PC   +0	00+0000000							<u> </u>
851   PC   +0000000+00   +1000000+01	851   PC   +0000000+00   +1000000+01	119   851	1 PC 1+0	00+0000000	1+1000000+01						141
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +0000000+00 +10000000+01  851 PC +00000000+00 000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +100000000	851 PC +000000+00 +1000000+01  851 PC +0000000+00  +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +0000000+00   +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +00000000000+00 +10000000+01  851 PC +000000000000+00 +10000000+01  851 PC +00000000000000+00 +10000000+01  851 PC +00000000000000000+00 +1000000000+01  851 PC +00000000000000000000000000000000000	120   85   121   851	1   PC   +0	00+0000000	+1000000+01   +1000000+01						141
#51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +0000000+001  #52 PC +00000000+001  #52 PC +00000000+001  #52 PC +000000000+001  #53 PC +000000000+001  #53 PC +0000000000+001  #53 PC +000000000+001  #53 PC +0000000000000+001  #53 PC +00000000000+001  #53 PC +000000000000000+001  #53 PC +00000000000000	#51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #52 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +00000000+001  #53 PC +0000000+001  #53 PC +00000000+001  #53 PC +00000000+001  #53 PC +00000000+001  #53 PC +0000000000+001  #53 PC +000000000+001  #53 PC +0000000000000+001  #53 PC +00000000000000000000000000000000000	122   85	1  PC   +0	00+0000000	1+1000000+01						141
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +00000000000+00 +10000000+01  851 PC +00000000000+00 +10000000000+01  851 PC +000000000000+0000000000000000000000	851 PC +0000000+00 +1000000+01		2 2	00+0000000	1+1000000+01		· - –				141
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +0000000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000000000+01  851 PC +000000000+01  851 PC +0000000000+01  851 PC +0000000000000+01  851 PC +00000000000000+01  851 PC +00000000000000000000000000000000000	851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +000000000000+00 +1000000+01  851 PC +00000000000+00 +10000000+01  851 PC +000000000+00 +1000000+01  851 PC +000000000000+00 +1000000+01  851 PC +000000000000000+00 +10000000+00 +10000000+00 +10000000+00 +1000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +1000000+00 +10000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +		PC	00+0000000	1+1000000+01						411
851   PC   +0000000+00   +1000000+01	851 PC +000000+00 +1000000+01		2 2	00+00000000	1+1000000+01			- <b>-</b>			41
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  1  851 PC +000000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +00000000000000000000000000000000000	851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +1000000+01   851 PC +00000000+00 +1000000+01  851 PC +000000000+00 +10000000+01  851 PC +000000000+00 +10000000+01  851 PC +0000000000000000+01  851 PC +000000000000+01  851 PC +00000000000000000000000000000000000		2	00+0000000	1+1000000+01	_	_	_	_	_	41:
#51 PC +00000004001 1000000+01  #51 PC +00000000+00 +10000000+01  #51 PC +0000000+00 +1000000+01	#51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #51 PC +0000000+001  #52 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0000000+001  #53 PC +0		PC	00+0000000	1+1000000+01						141
851 PC +0000000+00 +1000000+01	851 PC +000000+00 +1000000+01		2 2	00+0000000	1+1000000+01			- <del>-</del>		. <del>-</del>	141
851 PC +0000000+00 +1000000+01	851 PC +000000+00 +1000000+01		PC .	00+0000000	1+1000000+01	_	_	_	_	-	41
851 PC +000000+00 +1000000+01	##   ##   ##   ##   ##   ##   ##   #		PC	00000000	11+1000000+01	_	_			<b>-</b> -	41
#51 PC +0000000+00 +1000000+01	#51 PC +000000400 +1000000401		PC	00+0000000	11+1000000+01						14
#51 PC +0000000+00 +1000000+01	#51 PC +0000000+00 +1000000+01		PC	000000000000000000000000000000000000000	10+10000001+10						141
			200	0000000+00	1 + 1000000 + 01					-	141
			P C C	00+0000000	11+1000000+01			_	_	-	141
0 0 0 1 2 4 5	5 7 8 9 0 1	9	PCI	0000000	1+1000000+01	. —		-	- 1	- !	141
0 0 1 2 4 5	5 7 8 9 0 1		-	-	-	-		- \		<del>-</del> -	(
	5 7	_	_		2	4	<del>-</del>	، و		٠,	- 0

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 16 of 20)

A3 A4 A4 A4 A4 A4 A4 A4 A4 A4 A4 A4 A4 A4	ATION COEFICIENTS/LINEAR SEGMENTS    A2	A2 A3   A3   A3   A3   A3   A3   A3   A3	V   O   JY    CALIBRATION COEFFICIENTS/LINEAR SEGMENTS   THE   ILP
A3  A3	ATION COEFFICIENTS/LINEAR    A2	CALIBRATION COEFFICIENTS/LINEAR    A1	A0 A1 A1 A1 A2 A3    A1 A1 A2 A3
	ATION COEFFI 	CALIBRATION COEFFI  A1   A2       A2         A3	A0

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 17 of 20)

	D	41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    41  6    4	0 6 1
			- m
	A5		9 7
SEGMENTS	A 4		5
NTS/LINEAR	A3		
CALIBRATION COEFICIENTS/LINEAR	A2		.40
CALIBRATIO	A1	0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  00000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01  0000000+00 +1000000+01	- 2 6
	A0	[ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	8 1 -
E NIC NICTI IN UIO OIAYI IT MIR ILPI IR BIR IIEI		171   851   PC   +	1

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 18 of 20)

N I I I I I I I I I I I I I I I I I I I	NICT! OIAY! ILP! IE!	CALIBRAT	ION COEFFICI	CALIBRATION COEFFICIENTS/LINEAR SECMENTS	SEGMENTS	 	<u> </u>	/ / /
	N A 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		A2	A3	A4	A S		
	PC   PC	+0000000+001 +0000000+001 +0000000+001 +0000000+001 +0000000+001 +0000000+001 +0000000+001 +0000000+001					-	- !
207 851 PC   208 851 PC   209 851 PC   210 851 PC	851   PC   +0000000+00   +1000000+01 851   PC   +0000000+00   +1000000+01 851   PC   +0000000+00   +1000000+01 851   PC   +00000000+00   +1000000+01 851   PC   +0000000+00   +1000000+01	0 +1000000+01  0 +1000000+01  0 +1000000+01  0 +1000000+01						4116
	851 PC   +0000000+00   851 PC   +00000000+00   851 PC   +00000000+00   851 PC   +000000000+00   851 PC   +000000000+00   851 PC   +000000000+00	0   +1000000+01  0   +10000000+01  0   +1000000+01  0   +1000000+01						41161
	PCI PCI PCI PCI PCI	+0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01  +0000000+00 +1000000+01						
224   851   225   851   226   851   227   851   229   851   229   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   851   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239   239	224   85   18C   +0000000+00   +1000000+01 225   85   18C   +0000000+00   +1000000+01 226   85   18C   +0000000+00   +1000000+01 227   85   18C   +0000000+00   +1000000+01 228   85   18C   +0000000+00   +1000000+01 229   85   18C   +0000000+00   +1000000+01 230   85   18C   +0000000+00   +1000000+01 231   85   18C   +0000000+00   +1000000+01 232   85   18C   +0000000+00   +1000000+01	01+1000000+011 01+10000000+011 01+1000000+011 01+1000000+011 01+1000000+011 01+1000000+011 01+1000000+011 01+1000000+011		<b></b>	<b>¬</b>			41   6     41   6     41   6       41   6
- 0 0 0 3 2	1 1 0 1 1 8	- 2 6	- 40	- 5 - 1	9 - 9	1 1 1 1 1	1 2 2	1 8 7 9 0

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 19 of 20)

CALIBRATION COEFFICIENTS/LINEAR SECMENTS
A1 - A2
PC +0000000+00 +1000000+01
PC +0000000+00 +10000000+01
+0000001+100000011
10000001+100+000000+
+0000000+00 +1000000+01  +0000000+00 +1000000+01
+000000+001+1000000+011
+0000000+001+1000000+011
+0000000+001+1000004411 +0000000+001+1000000+011
110000000+10000000+011
+000000+000+000000+011
+0000000+00 +10000000+011 +0000000+00 +1000000+01
851   PC   +0000000+00   +1000000+01
249 851 PC +0000000+00 +1000000+01
250 851 PC +0000000+00 +1000000401  251 851 PC +0000000+00 +1000000+01
851 [PC] +0000000+00   +1000000+01
851 [PC +0000000+00 +1000000+01
100000001+100+00000+
851   PC  +0000000+00  +1000000+01
851   PC   +0000000 +00   +100000 +01
851   PC   +0000000+001 +1000000+01
+0000001+1000001+11
01+10000001011
851   PC   +0000000 +00   +1000000 +01
+000000+00 +1000000+01
+0000000+00100+000000+00000000000000000
-
2
6

TABLE 1.7-4. POIC DISPLAY REQUIREMENTS (Sheet 20 of 20)

IN UIO OLAYI IT MIR ILPI						
T MIR ILP!	CALIBRA	TION COEFFI	CALIBRATION COEFFICIENTS/LINEAR SFEMENTS	SECMENTS		
R BIR ITE						2
2 4 2 2 2						- × -
1 01 10	* • • • • • • • • • • • • • • • • • • •			1111111111		-1 IP IBI
			_			- -
- ·	:	_	_		_	II   B
- I. Au	I W	A2	- A3	A4	I A5	<u> </u>
			_		_	- -
			_		_	_
_ Z	-	_	_		_	_ _
1265   851   PC   +0000000+00   +1000000+01	1+1000000+01					
			-    -    -		_	141101
- - -	-	-	-	-		-
0 0 0	2	•	- س	- 4		- ۲
3578	6	•		, ,		- (

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 1 of 14)

N ULR   OY   N ULR   OY   N ULR   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N U   N	Olwri (Yello	WARNING VALUES (YELLOW LINE)	CRITICA	CRITICAL VALUES (		DI STATE	TE CODE	////I GODE
<u> </u>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SASSAM GOTTHOM MOTEGRANDS		-	6
<u> </u>	_		-	04301	EACEFIION FIGHTION FESSORE			×
<u> </u>	_	LOWER	OFFER	LOWER		, 	· - –	
	LIMIT	TIMIT	I LIMIT	L LIMITI				_
<u> </u>				EARTECIED I				
1 1 1 1 1 1 1 1 1 1	-		 			1	1 1 1	1 1
001   850   EM	=	_	_	0	#1 (Tb1	1) JOK	FAIL	14117
002   850   EM	=	_	_	-	E-BITE #2 (Tbl	1) lok	FAIL	1411
003   850   EM	=	_	_	o -	PWR OFF (Tbl	NOI	- C- F-	1411
004   850   EM	=	_	_	_	PWR OFF (TD)	- OF F	2 5	
	Ŧ	_		0	OISCS PWR OFF (TBI 1)	NO.	NO I	4117
	_	_	_		1 HB 7	960	2 2	1 1 1 2
006 850 EM	<u>~</u>			<b>-</b>	LISCS PWR OFF (IDI 1)		VE V	14117
	_	_	_				990	14117
00718501EM	=			- ·	O CDAS PWR OFF (101 1)	VEC	J ON	14117
008   850   EM	<del>-</del>	_	_	<b>-</b> •		230	2 2	14117
008   850   EM	<del></del>	_		<b>→</b> •		1 ON	YES	14117
009   850   EM	<del>-</del>	_		- ·		VE V	N C	14117
010 850	-	_				l CN	IVES	14117
	_				I AT SUST BID SOLVE ON THE		ž	14117
	Ξ	_		_			N C	14117
	Ξ		<b>-</b>		1 (TE) CHICE AID-DOS #2 (TE)		ž	14117
012   850   EM	Ξ.			<b>-</b>	7		YES	14117
01318501	<b>-</b> ;				LEATER OUTTER RYPASS	BYPS	NORM	14117
014   850   EM	Ē				OUTLET	NORM	BYPS	14117
012 820 EM	Ξ				INLET	BYPS	NORM	14117
0121050150	Ē					NORM	IBYPS	14117
2 0	<u>-</u> -		- <del>-</del>			ICI.S	NAO	14117
0101010			-			OPN	ICTS	14117
02018501		_		_	_	ICES	IOPN	14117
02118501	. –	-	-	_	_	NGO	ICES	4117
02218501	-		_	_	-	IYES	<u>N</u>	14117
	. –		_	_	_	ON-	IYES	14117
02418501			_	_		IXES	ON	14117
02518501	_		_	_	_	ON I	IXES	[4]
02618501		_	_	_	_	YES	<u> </u>	411/
		_	_	_	_	ONI	IYES	411/
02818501		_	_	_		ON-	lYES	14117
-		-	-			-	—	! -
- c		5	. 7	. E	9		-	<b>co</b>
) c		0	œ	9	9	2	o,	-

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 2 of 14)

<u>2 0</u>	N I	WARNING VALUES (YELLOW LINE)	VALUES	CRITICA	CRITICAL VALUES (RED LINE)		I ST	///    STATE CODE	
<u> </u>	101						_		
T M	N N	_		_	_	EXCEPTION MONITOR MESSAGE	_	_	IE IT
<u>8</u>	<u>ы</u>	UPPER	LOWER	UPPER	LOWER		= 0	-1	
		LIMIT	LIMIT	LIMIT	LIMIT/		_	_	
<u>~</u>	<u> </u>	-		_	EXPECTED		_	_	17 + 17
_	<u>~</u>	_	_		STATE		_	_	131 01
10291850	- -	_		_	-		ONI	IYES	141171
10301850	_	_			_		VEC		
10311850	-	_						200	
103018501							2 2	1153	
02012601							TES	2 :	1411/1
10341850					_		2 4	25.	1411/1
	· -	_			_		2 0	2 2 2	
		_		_	-		2 2	2 0	1111
103718501	- <i>-</i>	-					153	2 2 2	
02818501							2 3	IES	141
00000000							5	FAIL	1411/
0001600							Š.	FAIL	411/
	<del>-</del>	- •	_	_			<u>8</u>	FAIL	14117
	_			_	_		<u>8</u>	FAIL	141171
0421850	- -			_	_	•	<u>0</u>	FAIL	141171
	_		_	_	_		OK OK	FAIL	141171
	<del>-</del>	_	_	_	_		<u>lok</u>	FAIL	41 7
	_		_	_	_		<u>o</u>	FAIL	14117
046   850   EM	E E	_		_	- -	AVIONICS AIR -	FAIL	10K	14117
1047   850   EM	Σ	_		_	<b>-</b>	11NO AVIONICS AIR - PCS #1	FAIL	JOK	141171
104818201	_	_		_	_		<u>NO</u>	IOFF	141171
104918501	_	_		_	_		OFF	NO	141171
	<u>-</u>	_		_	_		NO.	OFF	141171
	_	-		_	_		OFF	NOI	141171
1052 850 EM	Eα			_	-	1 LO IFEA WATER FLOW #1	FAIL	IOK	141171
105318501EM	EM	_		_	-	11NO AVIONICS AIR - SCS #1	FAIL	IOK	141171
105418501	_	_		_	_		ŏ	FAIL	4117
10551850	_	_	_	_	_		ŏ	FAIL	141171
10561850	_	_		_	_		<u>o</u>	FAIL	141171
10571850	_	_		_	_	<u>.</u>	ŏ	FAIL	141171
105818501	_	_		_	_		X	FAII.	141171
105918501	_	_		_	_		ž	FAIL	141171
10601850	_	_		_	_		ŏ	FAII.	141171
10611850	_	_		_			S S	FAIL	141171
-		-	-				-	-	-
- 0			- ^	- ^	- m	- 4	<u>-</u> -		- a
, r		٠, ١	, c	y C	, ,		- (	~ (	р ( р .
		7	>	XD	90	٥	7	2	m 

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 3 of 14)

E NO C	N I W I O	WARNING VALUES (YELLOW LINE)	ARNING VALUES (YELLOW LINE)	CRITICAL (RED	CRITICAL VALUES   (RED LINE)		l IDI ST	U//// DI STATE CODE!////	1////I
	IOX	,	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						1
	NP .		-	_		EXCEPTION MONITOR MESSAGE			3 ×
<u>s</u> =	3 E	LIMIT	LOWER	LIMIT	LIMIT/		5	<u>.</u> - –	
	0				EXPECTED		_	_	11 11
_	<u>«</u>		_	_	STATE		_	_	31 OF
10621850	- 10	1		-			NOI	IOFF	14117
1063   850			_	_	_		OFF	NO	14117
1064   850	-		_	_	_		NO.	IOFF	14117
106518501	10		_	_	_		IOFF	NO.	14117
106618501	- 10		_	_	- -		NO.	OFF	14117
106718501	-		_	_	_		OFF	<u>N</u>	41   7
106818501	0		_	_	_		<u>N</u>	OFF	4117
10691850	_ 		-	_	_		OFF	NO.	14117
103810701	0		_	_	_		NO.	OFF	14117
10711850	- 10		_	_	- -		OEF	NO.	14117
10721850	0		_	_	_		NO	OFF	14117
10731850	- 10		_	_	- -		OFF	NO.	14117
10741850	- - 0		_	_	_		NO.	OFF	14117
10751850	- -		<u>.</u>	_	_		OFF	NO.	141
10761850	-		_	_			NOI	OFF	4117
10771850	10	_	_	_	_		OFF	<u>8</u>	14117
103818201	_ 		_	_	_		YES	2	411/
10791850	<u>-</u>		÷	_	_		ON	IYES	411/
10801850	<del>-</del>	_	_	_	_		IYES	<u>Q</u>	4117
10811850	- -	_	_	_	_		ON I	IYES	14117
10821850	70	_	_	_			IYES	<u> </u>	14117
108318501	10			_	-		ON!	IYES	14117
1084   850	10		_	_	_		ICLS	NGOI	14117
10851850	10	_	_	_	_		IOPN	ICES	14117
0861850	10	_		_	_		NO.	IOFF	14117
10871850	10		_	_	_		OFF	NO.	14117
10881850	10	_	_	_	_		NO.	OFF	14117
10891850	-	_	_	_	_	_	OFF	NO	14117
10901850	- 0	_	_	_	_	_	NO.	OPF	14117
10911850	- - -		_	_	_		IOFF	NO.	14117
10921850	- 0	_	_		_	_	NOI	OFF	14117
10931850	0		_	_		_	IOFF	NO.	14117
	- - -			_	_	_	NO!	IOFF	14117
-	!	  -  -  -  -  -	-				-		1 -
		<del>-</del> -	<u> </u>	- (	- ~	- 4			- a
0 0	_	<b>-</b> (	7 0	7 :	n (		٠, ٢		
	_	7	0	30	8 9	٥	7		

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 4 of 14)

1	WARNING VALUES (YELLOW LINE)	VALUES I LINE)	CRITICAL VAI	CRITICAL VALUES (RED LINE)			l  DI STA	////  STATE CODE!////	
UIR					NOT HOUSE	SOKSSOM GOFTNOM NOTHERDAY	-	-	
IT MIR INPI	daddii	0.250	I HPPER	LOWER	EACEFIION	DALLOR PESSONE	*0 -	]=	
0 0	LIMIT	LIMIT	LIMIT	LIMIT/			. <b>_</b>	_	IP 1B1
- N - O - O - O - O - O - O - O - O - O			_	EXPECTED			_	_	_ :
			_	STATE		1	_ !	_ !	131 01
1 109818501	! !						OFF	NOI	141171
109618501EMI			_	-	1 LO IFEA WATER FLOW #2		FAIL	<u>8</u>	141171
				-	11NO AVIONICS AIR - PCS	VIR - PCS 12	FAIL	N N	141171
		_	_	_	_		<u> 0</u>	FAIL	141171
		_	_	_	_		× i	FAIL	141171
1100   850		_	_	_	_		ž.	FAIL	1411/1
1101 850		_	_	_	_		Š.	FAIL	1411/1
110218501		_	_	_	_		Ŏ K	FAIL	1411/1
110318501		_	_	_	_		<u>8</u>	FAIL	141171
110418501		_	_	_	_		OK N	FAIL	141171
110518501	•	_	_	_	_		lok X	FAIL	_
110618501EM			_	0	UTILITY		NO.	OFF	141171
11071850   EM		_	_	-	1   PCS UTILITY	PWR OFF	OFF	NO.	141171
110818501		_	_	_	_		NO.	OFF	14117
110918501			_	_	_		OFF	<u>N</u>	141171
111018501		_	_	_	_		NO.	OFF	141171
111118501		_	_	_	_		OFF	<u>N</u>	
1112   850		_	_	_	_		<u>N</u>	OFF	1411/1
111318501		_	_	_	_		OFF	NO.	41   7
111418501		_	_	_	_		<u>N</u> O	OFF	141171
111518501		_	_	_	_		OFF	NO.	41/
111618501			_	_	_		NO.	OFF	
111718501 1		_	_	_	_		OFF	NO.	
1118 8501		_	_	_	_		NO.	OFF	141171
111918501		_	_	_	_		IOFF	<u>N</u>	1411/1
112018501		_	_				OFF	<u>×</u>	1411/1
112118501		_	_	_	_		NO	OFF	411/
			_	_	_		NO.	OFF	141171
		_	_	_	_		OFF	NO.	141174
112418501				_	_		NO.	OFF	141171
112518501			_	_	_		IOFF	NO.	141171
112618501		-	_		_		NO	IOFF	141171
112718501		-	. –		· <b>_</b>		IOFF	NO.	141171
				1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
-	_	_ ,	- (	r		_ 9	- ~		- a
_	-	2	7			· •	- (	- ‹	) r
3 5	7	0	8	8 9		٥	7	7	r T

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 5 of 14)

) N	N O I M T	WARNING VALUES (YELLOW LINE)	VALUES LINE)	CRIT	(TICAL VAL	CRITICAL VALUES (RED LINE)						DI STATE		CODE   / / /	<u> </u>
ABBIAN C	NP I I E	UPPER I	LOWER	UPPER LIMIT		LOWER LIMIT/ EXPECTED STATE		EPTIO	MON I	EXCEPTION MONITOR MESSAGE	SAGE	0			
128   850   1 129   850   1 130   850   1 131   850   1 132   850   1 133   850   1 133   850   1 134   850   1 135   850   1 136   850   1 137   850   1 138   850   1 138   850   1 139   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 121   850   1 122   850   1 122   850   1 124   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 126   850   1 127   850   1 128   850   1 129   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   1 120   850   850   1 120   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850	850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850   850	3740 3740 3358 4100 4101 1911 1911 1954 1954 1954 1954 1954 195	2396 887 887 31		3740    3740    819    819    1979    2035    2035    585    907    907    907    907    907    907    907    907    907    907				AIN BUS BUS VOL LOWER HU UPPER HU UPPER HU SSSURE 1 SSSURE 2 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 ATMOS 7 A	HI EXP MAIN BUS CURRENT EXP HAIN BUS VOLTAGE OOL HI IFEA LOWER HUMIDITY HI IFEA UPPER HUMIDITY ITEA PRESSURE 1 OOL ITEA PRESSURE 2 OOL HI LOWER ATMOS TEMP HI UPPER ATMOS TEMP HI IFEA WATER OUTLET TEMP HI IFEA WATER OUTLET TEMP HI IFEA WATER OUTLET TEMP HI STEP MTR PHASE A CURRENT HI STEP MTR PHASE A CURRENT HI STEP MTR PHASE B CURRENT HI STEP MTR PHASE B CURRENT HI STEP MTR PHASE B CURRENT HI STEP MTR PHASE B VOLTAGE HI STEP MTR PHASE B VOLTAGE HI STEP MTR PHASE B VOLTAGE HI STEP MTR PHASE B VOLTAGE HI COLD GUARD HTR VOLTAGE HI COLD GUARD HTR VOLTAGE HIL COLD GUARD HTR VOLTAGE HIL COLD GUARD HTR CURRENT	ARENT SE COL DITY DITY L L L P P T TEMP ET TEMP ET TEMP EMP EMP EMP EMP EMP EMP EMP EMP EMP	ON   OEF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF   OOF	I VES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I YES I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN I RUN	11111111111111111111111111111111111111	41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171 41171
	<u> </u>	-	- -		_						<u> </u>			- ~	<u> </u>
. 0	- 0		2		2	е е					ע פ			٠	. –
		,	_		œ	9					٥	1		,	

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 6 of 14)

MIR BI BI BI BI BI BI BI BI BI BI BI BI BI	IE NIO OIMT	WARNING VALUES (YELLOW LINE)	CRITICAL VALUES   (RED LINE)		
I.K.   UPPER   LOWER   UPPER   LOMER     LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIM	E E	-		. EXCEPTION MONITOR MESSAGE	
15.0	<u>= =</u>				]=     X
15.0   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1   15.1	_		_	- <u>-</u>	181 dl
1536   1536   1536   11 COLD PRIM HTR VOLTAGE   15003   15003   110 COLD RED HTR CURRENT   1536   11 COLD RED HTR CURRENT   15003   15003   15003   15003   110 COLD RED HTR VOLTAGE   15001   15003   15003   16104	- IR	_	STATE	· -	
1950  LS3   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   3003   30		15361	15361	ı	
1950  LS   1936   1936   1950 HTR VOLTAGE   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS   1950  LS	820	30031	1 30031		
HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE BOOST HTR CURRENT   HE HE COLOR HE BEOLIES   HE HE HE CURRENT   HE HE HE HE HE HE HE HE HE HE HE HE HE	_	1536	1 1536	COLD	
1970   15   15   15   16   16   16   17   17   17   17   17		3003	1 30031	B0051	1/1761
1950  1.5   3003   3003   103   11   11   10		30721	1 30721		1771
1536   1536   1536   11 HI HOT GUARD HTR VOLTAGE   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   1536   153003   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   15072   150		3003	1 30031	HOT	1.171
1901   153   3003	127718501151	1536	15361	HOT	141171
1950  L5  3072    HI HOT REIM HTR VOLTAGE   1950  L5  3072    HI HOT REIM HTR VOLTAGE   1950  L5  3072    HI HOT REIM HTR VOLTAGE   1950  L5  3072    HI HOT REIM HTR VOLTAGE   1950  L5  3072    HI HOT REIM HTR VOLTAGE   1950  L5  3072    HI CJ TEMP - COLD ZONE #1   1950  L5  3072    HI CJ TEMP - COLD ZONE #2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 1   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2   1950  L5  3071    HI CJ TEMP - SAMPLE   SENSOR 2	12100818/71	3003	18008	HOT	14117
HI HOT RED HTR CURRENT   1903   1903   11 H HOT RED HTR CURRENT   1907   11 H HOT RED HTR CURRENT   1907   11 H HOT RED HTR CULD ZONE #1   1907   11 H CJ TEMP - COLD ZONE #2   1907   11 H CJ TEMP - HOT ZONE #2   1907   11 H CJ TEMP - HOT ZONE #2   1907   11 H CJ TEMP - HOT ZONE #2   1907   11 H CJ TEMP - HOT ZONE #2   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   1907   11 H CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TEMP - SAMPLE I SENSOR 1   11 CJ TE		30 / 2	3072	HOT	141171
Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage   Harriage		3003	1 30031	HOT	141171
Har CJ TEMP - COLD ZONE #1   Har CJ TEMP - COLD ZONE #2   Har CJ TEMP - COLD ZONE #2   Har CJ TEMP - Har ZONE #2   Har CJ TEMP - Har ZONE #2   Har CJ TEMP - Har ZONE #2   Har CJ TEMP - Har ZONE #2   Har CJ TEMP - Har ZONE #2   Har CJ TEMP - SAMPLE 1 SENSOR 1   Har CJ TEMP - SAMPLE 1 SENSOR 1   Har CJ TEMP - SAMPLE 2 SENSOR 1   Har CJ TEMP - SAMPLE 2 SENSOR 1   Har CJ TEMP - SAMPLE 2 SENSOR 1   Har CJ TEMP - SAMPLE 3 SENSOR 1   Har CJ TEMP - SAMPLE 3 SENSOR 1   Har CJ TEMP - SAMPLE 4 SENSOR 1   Har CJ TEMP - SAMPLE 4 SENSOR 1   Har CJ TEMP - SAMPLE 5 SENSOR 1   Har CJ TEMP - SAMPLE 5 SENSOR 1   Har CJ TEMP - SAMPLE 5 SENSOR 1   Har CJ TEMP - SAMPLE 5 SENSOR 1   Har CJ TEMP - SAMPLE 5 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - SAMPLE 6 SENSOR 1   Har CJ TEMP - S		10/5	30721	HOT RED	1 141171
HI CJ TEMP - COLO ZONE #2   1   1   1   1   1   1   1   1   1		1/78	1206	CJ TEMP -	1 141171
HI CJ TEMP - HOT ZONE #1   HI CJ TEMP - HOT ZONE #2   HI CJ TEMP - HOT ZONE #2   HI CJ TEMP - HOT ZONE #2   HI CJ TEMP - HOT ZONE #2   HI CJ TEMP - SAMPLE 1 SENSOR 1  HI CJ TEMP - SAMPLE 1 SENSOR 1  HI CJ TEMP - SAMPLE 2 SENSOR 1  HI CJ TEMP - SAMPLE 2 SENSOR 1  HI CJ TEMP - SAMPLE 2 SENSOR 1  HI CJ TEMP - SAMPLE 3 SENSOR 2  HI CJ TEMP - SAMPLE 3 SENSOR 2  HI CJ TEMP - SAMPLE 4 SENSOR 2  HI CJ TEMP - SAMPLE 4 SENSOR 2  HI CJ TEMP - SAMPLE 5 SENSOR 1  HI CJ TEMP - SAMPLE 5 SENSOR 1  HI CJ TEMP - SAMPLE 5 SENSOR 1  HI CJ TEMP - SAMPLE 5 SENSOR 1  HI CJ TEMP - SAMPLE 5 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6 SENSOR 1  HI CJ TEMP - SAMPLE 6		1/78	1206	CJ TEMP - COLD	14117
HI CJ TEMP - HOT ZONE #2   1   1   1   1   1   1   1   1   1		1/78	106	CJ TEMP - HOT	141171
HI CJ TEMP-SAMPLE   SENSOR 1   HI CJ TEMP-SAMPLE   SENSOR 1   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 1   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2   HI CJ TEMP-SAMPLE   SENSOR 2		1/78	1206	CJ TEMP - HOT ZONE	1 141171
HI CJ TEMP-SAMPLE   SENSOR   1   1   1   1   1   1   1   1   1		1/78	1206	CJ TEMP-SAMPLE 1	141171
HI CJ TEMP-SAMPLE 2 SENSOR 1    HI CJ TEMP-SAMPLE 2 SENSOR 1    HI CJ TEMP-SAMPLE 2 SENSOR 2		1/28	1206	CJ TEMP-SAMPLE 1	
HI CJ TEMP-SAMPLE 2 SENSOR 2   HI CJ TEMP-SAMPLE 2 SENSOR 2   HI CJ TEMP-SAMPLE 3 SENSOR 1   HI CJ TEMP-SAMPLE 4 SENSOR 1   HI CJ TEMP-SAMPLE 4 SENSOR 1   HI CJ TEMP-SAMPLE 4 SENSOR 1   HI CJ TEMP-SAMPLE 5 SENSOR 1   HI CJ TEMP-SAMPLE 5 SENSOR 1   HI CJ TEMP-SAMPLE 5 SENSOR 1   HI CJ TEMP-SAMPLE 5 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1	28918501151	1/70	1/06	CJ TEMP-SAMPLE 2	1 141171
HI CJ TEMP-SAMPLE 3 SENSOR 1    HI CJ TEMP-SAMPLE 3 SENSOR 1    HI CJ TEMP-SAMPLE 4 SENSOR 2    HI CJ TEMP-SAMPLE 4 SENSOR 1    HI CJ TEMP-SAMPLE 4 SENSOR 1    HI CJ TEMP-SAMPLE 4 SENSOR 1    HI CJ TEMP-SAMPLE 5 SENSOR 2    HI CJ TEMP-SAMPLE 5 SENSOR 2    HI CJ TEMP-SAMPLE 5 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3	124018501151	1,20	1706	CJ TEMP-SAMPLE 2 SENSOR	141171
HI CJ TEMP-SAMPLE 3 SENSOR 2   HI CJ TEMP-SAMPLE 4 SENSOR 1   HI CJ TEMP-SAMPLE 4 SENSOR 1   HI CJ TEMP-SAMPLE 4 SENSOR 1   HI CJ TEMP-SAMPLE 4 SENSOR 2   HI CJ TEMP-SAMPLE 5 SENSOR 2   HI CJ TEMP-SAMPLE 5 SENSOR 1   HI CJ TEMP-SAMPLE 5 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1   HI CJ TEMP-SAMPLE 6 SENSOR 1	129118501151	0.50	1/06	CJ TEMP-SAMPLE 3 SENSOR	1 141171
HI CJ TEMP-SAMPLE 4 SENSOR 1    HI CJ TEMP-SAMPLE 4 SENSOR 1    HI CJ TEMP-SAMPLE 4 SENSOR 2    HI CJ TEMP-SAMPLE 5 SENSOR 1    HI CJ TEMP-SAMPLE 5 SENSOR 1    HI CJ TEMP-SAMPLE 5 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3    HI CJ TEMP-SAMPLE 6 SENSOR 3		1/20	1/06	CJ TEMP-SAMPLE 3 SENSOR	1 141171
HI CJ TEMP-SAMPLE 4 SENSOR 2   907   HI CJ TEMP-SAMPLE 5 SENSOR 1   907   HI CJ TEMP-SAMPLE 5 SENSOR 1   907   HI CJ TEMP-SAMPLE 5 SENSOR 2   907   HI CJ TEMP-SAMPLE 6 SENSOR 2   907   HI CJ TEMP-SAMPLE 6 SENSOR 2   907   HI CJ TEMP-SAMPLE 6 SENSOR 2   907   HI CJ TEMP-SAMPLE 6 SENSOR 2   907   HI ALIGN ARM TEMP   907   HI ALIGN ARM TEMP   1227   HI ALIGN ARM TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100   YES   907   HI SEM TRACK TEMP   100	129318501151	1/20	1/06	CJ TEMP-SAMPLE 4 SENSOR	141171
HI CJ TEMP-SAMPLE 5 SENSOR 1    HI CJ TEMP-SAMPLE 5 SENSOR 2    HI CJ TEMP-SAMPLE 5 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 1    HI CJ TEMP-SAMPLE 6 SENSOR 1    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2    HI CJ TEMP-SAMPLE 6 SENSOR 2	1294185011.51	9271	1706	CJ TEMP-SAMPLE 4 SENSOR	1 141171
Hart   1971   1971   1972   1973   1974   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975   1975	1295185011.51	827	1706	CJ. TEMP-SAMPLE S SENSOR	1 141171
H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ TEMP-SAMPLE & SENSOR I   H CJ	129618501LS1	8271	1000	CJ TEMP-SAMPLE 5 SENSOR	1 141171
850 LS 987 1 1227	1297   850   LS	8271	100	C1 TEMP SAMPLE 6 SENSOR	141171
850 LS   827   907   HI SEM TRACK TEMP   NO   YES   850	1313   850   LS	1286	12271	CO LEMP-SAMPLE 6 SENSOR	141171
8501   1   1   1   1   1   1   1   1   1	1314   850   LS	9271	1227	SEM TONCE	141171
8501   1   1   1   1   1   1   1   1   1	146518501	_		SEM INACA	_
8501	146618501				YES
NO   YES   141	146718501	_		_	TES   41
1   1   1   2   3   3   6   7   7   7   7   7   7   7   7   7	146818501 1	_	. <u>-</u>		IYES  41
2 33					
8 9	0	1 2	2 3 3	·uc	
	3 5	2 0	8 9 8		

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 7 of 14)

1	Particular Control of Control	SHI DES	CRITICA	CRITICAL VALUES 1			900J 340	1////1
I IC NI	(YELLOW LINE)	LINE)	(RED LINE)	LINE)		101		
		1			ESSAGE		_	
×	_		-		EACEF 110N NOTES	=0	]=	X IA
B	UPPER	LOWER	UPPER	LOWER .		_	_	
<u> </u>	LIMIT	LIMIT	LIMIT	LIMITA		_	_	_
				EXFECTED		_	_	10 IEI
- <del>-</del>	- !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		·	1 0 2 -	IYES	141171
1030.004			_	_		2 2	FATI.	141171
100818941				_		5 5	FAIL	141171
105016841				_		5 5	FAII.	141171
10081064				_		Š	FAIL	141171
10501164			_	_		×	FAIL	141171
195815641		_	_	_		OK O	FAIL	141171
149418501			_	_		ÖK	FAIL	141171
149518501	_	_	_	_	_	Ŏ.	FAIL	141171
149618501		_	_	_	-	JOK	FAIL	141171
149718501		_	_	_		OK	FAIL	141171
149818501		_	_			OK	FAIL	141171
149918501		_	_			10K	FAIL	141171
150018501	_	_	_		·	NO!	FAIL	14117
150118501	_	_	<del></del> -			lok	FAIL	4117
150218501	_					lok	FAIL	141171
1503   850	_	_				ЮK	FAIL	1411/1
150418501	_	_				İOK	FAIL	141171
150518501	_	_				NO!	FAIL	1411/1
120618501	_	_				NO.	FAIL	1411/1
150718501	_	_				lok	FAIL	1411/1
120818501	_	_				OK	FAIL	_
150918501	_	_	<b></b> .			loK	FAIL	_
151018501	_	_				10K	FAIL	
151118501	_	_				NO.	FAIL	_
1512   850		_			-	NO.	FAIL	1411/1
1513   850	-	_				OK OK	FAIL	_
1514   850	_	_	_		<b></b>	OK	FAIL	141
1515   850	_	_	_			lok	FAIL	_
151618501	_	_				lok	FAIL	41
1517   850	_	_	_		-	lok	FAIL	141
1518   850	_	_	_	_		lok	FAIL	_
151918501	_	_				lok	FAIL	. 1411/
152018501	_	_		- 1		1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	_	-		_ 4		- 8 7 8 8
_ (		- 0	5	3 3		۰		
) )	<b>+</b> C	; C	8	8 9		٥	7	
~	7	>	,					

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 8 of 14)

I ICNI	WARNING VALUES (YELLOW LINE)	ARNING VALUES (YELLOW LINE)	CRITICAL VAL	CRITICAL VALUES (RED LINE)		ts IOI		
2 2	!						200	
E &	92991	1000		_	EXCEPTION MONITOR MESSAGE	. <u>-</u>	_	
_	LIMIT	LOWER	LIMIT	LOWER		<b>=</b> 0	<del>"</del>	
- RI 10 -		_		EXPECTED		_	_	_
- - - - -			_	STATE				
						- 1	-	10 (E)
1 105811261		_				X	IFATI	141171
100012701		_	_	_		Š	15871	
100816701		_	_	_		5 2	714.0	14117
1524   850		_	_	_		5 5	FAIL	1111
105816761		_		_			TENT!	7 7 7 7
		_		_		2 2	FAIL	1414
			_	_		5 3	1100	1411/1
152818501		_	_	_		5 5	FAIL	
122918501	_	_	_	-		5 5	FAIL	1411/
153018501 1	_	_	_			ž į	FAIL.	141171
			_			Š.	FAIL	141171
153218501	_					<u>×</u>	FAIL	141171
153318501	_	-	-			×O.	FAIL	141171
153418501		_				<u>š</u>	FAIL	141171
153518501	_	_	-			Š.	FAIL	141171
153618501		-	_			OK	FAIL	141171
153718501	-	-	-			<u>  0</u>	FAIL	141171
153818501				_		Š	FAIL	141171
153918501	_	-				<u>o</u> K	FAIL	141174
154018501	-	-	-			<u> 0</u>	FAIL	
154118501	-					×o.	FAIL	
154218501	_	-	-			<u>×</u>	FAIL	141171
154318501		-				Š.	FAIL	14117
154418501	_	-			_	OK OK	FAIL	141171
1545   850	-	-			_	OK	FAIL	141171
1546/850/	_	-			_	<u>×</u>	FAIL	141171
1547   850	_	_			_	<u>o</u> K	FAIL	141171
154818501	-				_	OK OK	FAIL	141171
154918501	-		- •		_	OK	FAIL	141171
155018501	-					OK	FAIL	141171
155118501					_	OK	FAIL	141171
155218501					_	OK OK	FAIL	141171
					_	OK	FAIL	41171
	- 1	- :	-	_		O.K	FAIL	41171
<u>-</u>	_	_	_	-				
0 0	-	2	7	- m	- \		- 1	_
3 5	7	0	œ		9 1	•	`	88
			,	-	9	7	6	

141171 141171 141171 141171 TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 9 of 14) |41|7| |41|7| |41|7| FAIL FAIL FAIL |FAIL |FAIL |FAIL |FAIL |FAIL |FAIL |FAIL |FAIL FAIL FAIL FAIL FAIL FAIL FAIL | FAIL | FAIL | FAIL FAIL FAIL FAIL FAIL FAIL |FAIL |FAIL |FAIL |FAIL -99 EXCEPTION MONITOR MESSAGE | LOWER | | LIMIT/ | |EXPECTED| | CRITICAL VALUES STATE (RED LINE) UPPER LIMIT - 2 8 - 20 N; | WARNING VALUES (YELLOW LINE) UPPER LIMIT OMT lox |584|850| |585|850| |586|850| | 566|850| | 567|850| | 568|850| | 569|850| | 570|850| | 571|850| | 574|850| | 578|850| | 578|850| |579|850| |580|850| |581|850| 1582 | 850 | 1583 | 850 | 155418501 155518501 155618501 155718501 155918501 156018501 156118501 156318501 156418501 156418501 NIO UIR MIR BI EI 

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 10 of 14)

		WARNING VALUES	CRITICA	CRITICAL VALUES		_		////
	- 1	(YELLOW LINE)	RED (RED	(RED LINE)		IDI ST	STATE COD	CODE 1////
X X	_	_		-	EXCEPTION MONITOR MESSAGE			1
- - - -	_	LOWER	I UPPER	LOWER	TOWN HOLLING HESSAGE		<u>-</u> 	
Y E! IT	LIMIT	LIMIT	LIMIT	LIMIT/		<u> </u>	¶ 	× .
_	_	_	_	EXPECTED				
- R	_	- 1	_	STATE				<u> </u>
58718501	-	-	-	-	,			
58818501	_					ě	FAIL	14117
58918501	_					ŏ	FAIL	14117
59018501	-					š	FAIL	4117
59118501	_	-				) OK	FAIL	14117
592   850	_		_			ŏ	FAIL	14117
59318501	_		-			Š	FAIL	14117
59418501	_	-				<u>×</u>	FAIL	_
59518501	_	_	_			ŏ	FAIL	_
59618501	_	_				<u>Š</u>	FAIL	4117
59718501		_				Š	FAIL	14117
59818501	_					Š	FAIL	14117
59918501	_	_		-		<u>x</u>	FAIL	41
10581009	•	_				Š	FAIL	14117
601/850/	_	_		-		5 5	FAIL	1411
	_	_	_	· -		5 5	FAIL	
603   850	_	_	_	-		5 5	FAIL	411/
60418501	_	_	_	_		200	FAIL	7111
60518501	_	_	_	_		2 2	LEAIL	7
10281909	_	_		_		<u> </u>	1140	
60718501	_	_		_		ž	FATT	7111
608   850	_	_		_			ונייוני	
60918201	_	_		_		Š	TEAT.	716
610 850	_	_		_		2 2	L W I I	17.
61118501	_	_		_		2 2	IFAIL	1111
612 850	_	_		_		2 2	1140	7 7 7
613 850	_	_		-		2 2	FAIL	711
614 850	_	_	_	_		200	7140	1
615 850	_	_	_	_		5 5	FAIL	1411
61618501		_	_	_		5 3	FAIL	1411/
61718501	_	_	_	_		5 5	FAIL	1411/
	_	_	_			<u> </u>	FAIL	411/
61918501	_	_	-			Š	FAIL	4117
-	-	-	-			108	FAIL	141   7
- c		– r	<b>-</b> ‹	- ·	-	-	-	_
) u	٦,	7 (	?	m m	9	7	7	8
ני	7	n	<b>6</b> 0	8 9	4	,	đ	
					•	,	•	

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 11 of 14)

-	1=   X	- B		10 IEI	FAIL 141171	FATI. 141171	_	FAIL  41171	_	_	_	FAIL  41  /		FAIL   4117		-	FAIL  41 7		FAIL (4117)	_	_	FAIL  41  /	FAIL  411/1	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	(  FAIL  411/1	
1 -	(ESSAGE   0=	-		-	XO-	200	N N	OK	OK	10к	10K	lok	IOK	IOK	· lok	¥ ŏ	OK	OK	N S	ž Š	10K	lok	IOK	<u>8</u>	NO.	OK	10K	IOK	IOK	NO!	NO!	10K	HOK	lok	
	EXCEPTION MONITOR MESSAGE				1																<b></b> .				-	_									
(RED LINE)	_	LOWER	LIMIT/	EXPECTEDI		_	_	_	_	_							_			. –	_	<b>-</b>				_	_	_	_	-	-	<u>-</u> -	_		-
(RED LINE)	-	I UPPER	LIMIT			_			_	_	_	_	_								_	_					_	-	_	_	_	_	_		_
LINE)		LOWER	LIMIT	_	-	-						_	_	_				_			-	_	_				. –	. –	. –	-	. –		-	_	_
(YELLOW LINE)		UPPER	LIMIT			1 1 1 1 1								_	_				_				. –	_											_
IC NI OINI	_	MIK INFI			<u>я</u>	1 1 1 1 1 1 1	62018501	1050129	10681779	62318301	62418301	62618501	62718501	62818501	62918501	63018501	63118501	63318501	634   850	63518501	636   850	63818501	639   850	64018501	641   850	64218501	64318301	644   650	105010	64618301	4 / 16301	648 8501	65018501	65118501	65218501

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 12 of 14)

1////1		<u> </u>			111	- ;	L  41171	_	_	_	L  41 7		14117	_	_	_	_	=	4117	_	4]	_	141171		41	_		1411/			-	141	_	14117	. !
		-	 	<del>-</del> ·		- !	FAIL	FAIL	IFAIL	FAIL		FAIL		FAIL	FAIL	IFAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	IFAII.	FAIL	FAIL	FAIL	FAIL	FAIL	
		AGE !					<u>8</u>	OK	<u>ok</u>	<u>ŏ</u>	Š	<u> </u>	Š	Ö	- OK	OK	<u>8</u>	Š	ž	<u>o</u>	Ö	ğ	ž	ğ	IOK	<u>  OK</u>	ŠČ	žě	ŏ	<u>o</u> K	ŏ	OK	ŏ.	<u>š</u> <u>š</u>	1 1 1 1 1
	-	EXCEPTION MONITOR MESSAGE	-		- <del>-</del>				•	•																									
CRITICAL VALUES (RED LINE)		- LOWEP	LIMIT/	EXPECTED	STATE							_	_					-	- -				_	_				_	_					_	
CRITIC		I UPPER	LIMIT	_		-						_						_	_			_	_												1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
WARNING VALUES (YELLOW LINE)		LOWER	LIMIT	_	_						-	_						_				_					_							_ :	
			LIMIT		_					_	_	_																						1	
E N O O IMT		<u>-</u>	Y El IT	_	- :	65318501	65418501	65518501	65618501	65718501	65818501	65918501	66118501	66218501	66318501	66418501	66518501	66618501	66/1850	66918501	67018501	67118501	67218501	67418501	67518501	67618501	67718501	10081879	68018501	683 1850 1	68218501	68318501		68518501 1	-

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 13 of 14)

<u>ر</u>	WARNING VALUES	VALUES	CRITICAL VALUES	. VALUES !		. — -	DI STATE		CODE 1////1
E NIO OIMT		LINE		1			! !	-	
<u>κ</u> χ	- - 	_	_ ·	-	EXCEPTION MONITOR MESSAGE	- JONG	=0	<u>-</u>	
_	I UPPER	LOWER	UPPER	LOWER		_			_
	_	LIMIT	LIMIT	EXPECTED!		_			
				STATE		_		- !	- i
×				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		O.K	FAIL	14117
10301707	_	_	_	_			, A	FAII.	14117
100001000			_	_			5 5	FAIL	14117
10091/89				_			5 5	TIVE	141
10581889	_						5	TEALL	
10581689	<b></b> .						Š	FAIL	
10581069	_						ok Ok	LAIF	7 7 7
69118501	_	_					<u>×</u>	FAIL	1111
69218501	_	_	_				š	FAIL	1411/
69318501	_	_		_	_		N N	FAIL	14117
69418501		_	_	_			ÖK	FAIL	14117
69518501	_	_	_	_			ÖK	FAIL	14117
10501505		_	_	_			Š	FAIL	14117
10581069		_	_	_			Š	FAIL	141171
1050160			_	_	_		2 2	FAIL	14117
10501000			_	_	_		ž	FAIL	14117
1001669		- <b>-</b>		_	_		5 5	FAIL	14117
1009100/				_	_		2 2	EATI	14117
10081107					_		5 5	TIVE	14117
1058170/				_			5 3	EATL	4117
10081507				_	_		5	11431	14117
704   850				. –	_		ž č	FAIL	14117
70518501	_				_		Š	FAIL	
10618501	_				_		š	FAIL	_
10281707	_	_					OK	FAIL	
70818501	_	_					<u>S</u>	FAIL	_
10581607	_	_					OK	FAIL	_
1710   850	_	_	_				10K	FAIL	_
171118501	_	_	-				lok	FAIL	_
11218501		_	_				NO.	FAIL	_
1713 (850)	_	-	_	_			lok	FAIL	_
171418501		_	_	_			ÖK	FAIL	14117
196815171	. <b>-</b>		-	_	_		<u> </u>	FAIL	_
10201211		_	_	_	_		) X	FAII.	14117
1059191/1			_	_	_		2 3	17471	_
10581/1/1							5	11 11	-
1718 850	-		- 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	1 1 1	-	_     
		-	_	-		- પ		,	. 8
- c		5	2			י כ			9 1
<b>5</b>	•	c	Œ	9		٥		4	

TABLE 1.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 14 of 14)

- N	WARNING VALUES	VALUES	CRITICA	CRITICAL VALUES	, ; ; † † † † ; ; ; ; ; ; ; ; ; ; ; ; ;	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	(ELLO)	(YELLOW LINE)	I (RED	(RED LINE)		lDI S	STATE CODE	CODE1////I
	_				EXCEPTION NOTTED MESON		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-
P	UPPER	LOWER	UPPER	LOWER	EACEL LION HOMITON MESSAGE			
17	LIMIT	LIMIT	LIMIT	LIMIT/		5 	<u>"</u> 	
	_		_	EXPECTED				
	_		_	STATE				1 2
	_	; ; ; ; ;	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!					
	_					Ö	FAIL	14117
	_					Š	FAIL	4117
			_			Š	FAIL	4117
	_		_	_		5 3	FAIL	141171
	_		_	_		2 2	FAIL	4117
	_		_	_		ž	FAIL	
			_	_		Ö	FAIL	41.14
				<del>-</del>		ŏ	FAIL	4117
				_		IOK	FAIL	4117
						<u>0</u>	FAIL	4117
						IOK	FAIL	41171
						OK	FAIL	41171
	_					<u>0</u>	FAIL	41171
						OK	FAIL	41171
					•	<u>×</u>	FAIL	41171
		-				ŏ:	FAIL	4117
	_	-		- <b>-</b>		Š	FAIL	4117
		_	_			Š	FAIL	
	_			<b></b>		Š	FAIL	~
		-	_			<u>×</u>	FAIL	_
	_	_				OK S	FAIL	
	_	-	-			XO.	FAIL	
	_	_		-		<u>X</u>	FAIL	41171
	_	-				<u>Š</u>	FAIL	41171
	-	_				Š	_	41171
	_	_	_	-		5	_	4117
	_	-				Š	_	41171
			-			ě	FAIL	41171
			-			Š	FAIL	41171
		-				Š	FAIL	41171
						OK	FAIL	4117
					_	KUN	-	42171
	- !!		- 1	-		ONI	IYES	142171
	_	_	_		1		-	
	-	7	7	3 3	7		- r	- «
	2	0	œ	, 4	•	`	_	8
	ı	,	>		9	7	6	~

## 1.8. FLIGHT SOFTWARE REQUIREMENTS

This section of the Experiment/Facility Requirements Document (E/FRD) defines the Space Station Freedom (SSF) Data Management System (DMS) software functions required to support the Space Station Furnace Facility (SSFF).

The SSFF Core Control Unit (CCU) software will interface to the SSF Payload Executive Software (PES) for DMS services and executive-level control. The SSFF Furnace Control Unit (FCU) and Furnace Actuator Unit (FAU) software provides networking, data processing, storage, and data acquisition and control for Furnace Module-1. The SSFF software external interface diagram is shown in Figure 1.8-1. The SSFF software component tree is shown in Figure 1.8-2. These components will reside in the DMS hardware. The following subsections define the required resources and data handling requirements.

#### 1.8.1 COMMAND SUPPORT

The SSF via the PES software will support the issuance of commands and SSFF activation given by the ground, onboard crew, or Tier 1.

#### 1.8.2 HEALTH AND STATUS DATA

The PES will acquire health and status data from the SSFF and distribute it to Tier 1 on board and to the Payload Operations Integration Center (POIC) on the ground.

#### 1.8.3 ONBOARD STORAGE

The SSF will provide storage for SSFF and/or Furnace Module-1 program loads, operations, status, and science data.

#### 1.8.4 DISPLAY

The SSF multipurpose application console (MPAC) will provide backup support of the SSFF crew interface for onboard SSFF configuration and preparations for Furnace Module-1 experiment operations.

# 1.8.5 PROGRAM LOADS AND MODIFICATIONS DOWNLOADING

The SSF software shall support the downloading of SSFF program loads and modifications.

#### 1.8.6 ANCILLARY DATA

The SSF shall support requests for ancillary data.

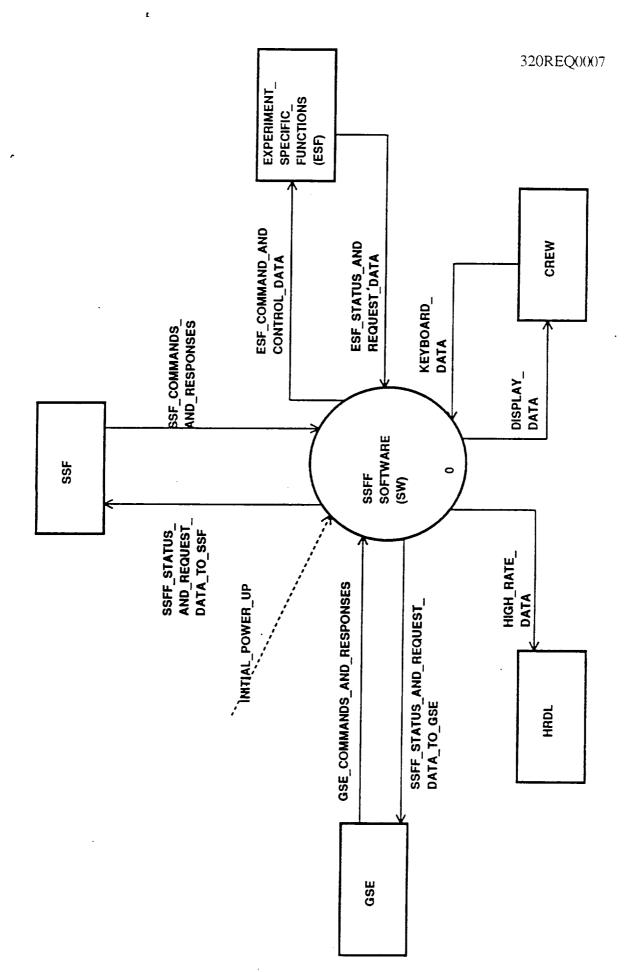
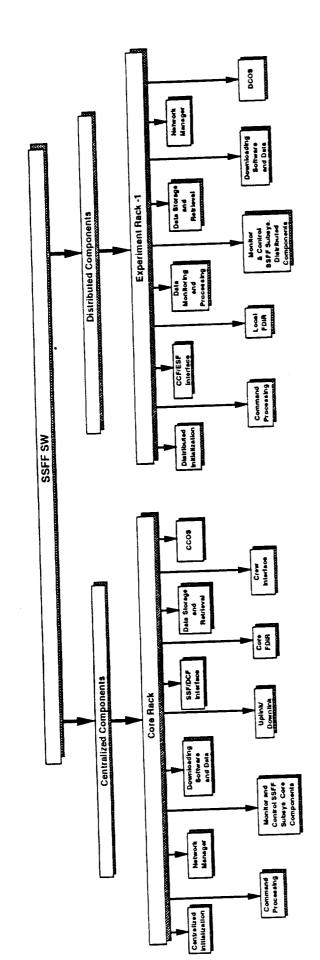


FIGURE 1.8-1. SSFF SOFTWARE EXTERNAL INTERFACE DIAGRAM



			<u> </u>
•			
			, <u> </u>
		·	
			<u> </u>

## 1.9. PHYSICAL INTEGRATION

# 1.9.1 RACK INTEGRATION AND CHECKOUT

Physical integration during prelaunch consists of checkout and integration of Furnace Module-1, the individual Core Rack and Experiment Rack-1, and finally the SSFF as an integrated system. Interfaces are progressively verified as the buildup of the Space Station Furnace Facility (SSFF) is performed. Following shipment to Kennedy Space Center (KSC), the facility is visually checked for physical integrity, and a limited functional test is performed to ensure operability and Space Station Freedom (SSF) interface compatibility. The prelaunch activities flow is shown in Figure 1.9-1. Table 1.9-1 provides the integration facility requirements for each stage of integration. Table 1.9-2 describes the requirements and activities at each step of the integration process.

#### 1.9.1.1 Core Rack Checkout

Tests, using the appropriate ground support equipment (GSE) including SSF and experiment rack interface simulators, will be performed to verify proper operations of the Core Rack. Testing will include operation of each SSFF subsystem and component to its operational limits, and an integrated SSFF exercising each of the interface functions, through the use of simulators, with the SSF and the experiment rack.

## 1.9.1.2 Experiment Rack-1 Checkout

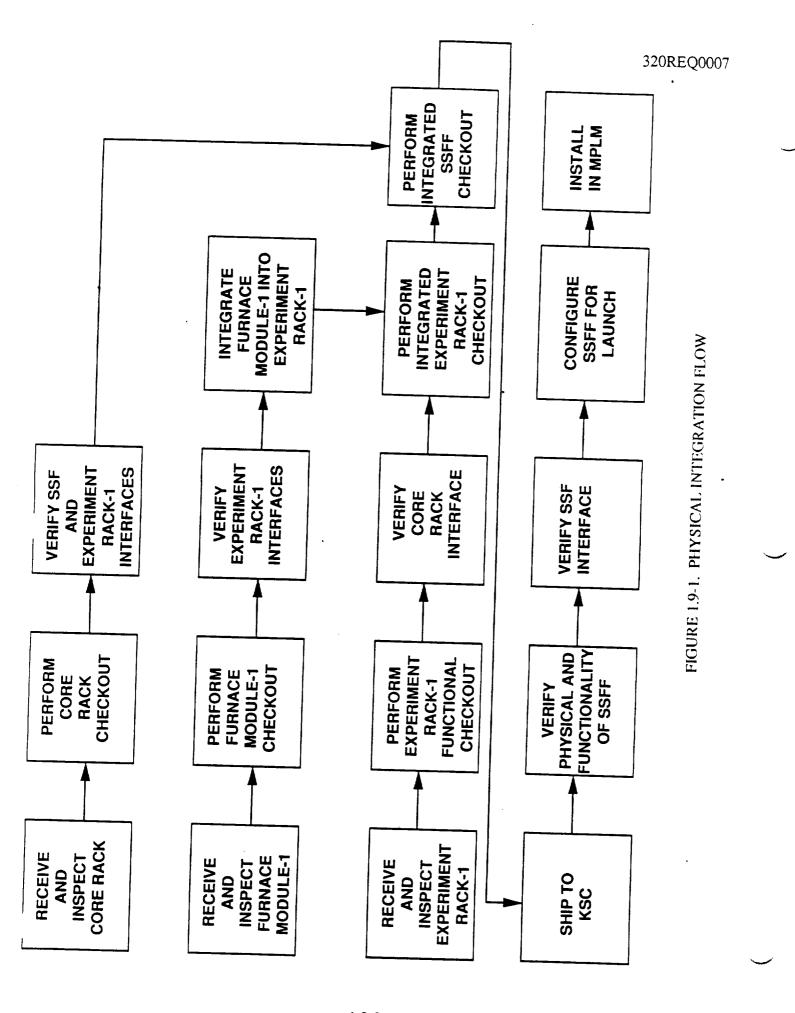
The pre-experiment rack checkout will consist of verifying the performance of the SSFF distributed subsystems in Experiment Rack-1 and its interfaces to the Core Rack and Furnace Module-1.

## 1.9.1.3 Furnace Module-1 Checkout

Furnace Module-1 tests will be used to verify the performance to operational limits with the exception that heater limits will only be to the extent that they prove operability. The Furnace Module-1 interface to Experiment Rack-1 will be verified through the functional performance tests and the physical connects of the experiment rack simulator.

## 1.9.1.4 Integrated Furnace Rack Checkout

Following integration of Furnace Module-1 into Experiment Rack-1, the rack performance and interfaces will be verified using a Core Rack simulator and test set. Tests will be limited to only those required to verify Furnace Module-1 to Experiment Rack-1 interfaces.



## TABLE 1.9-1. SSFF INTEGRATION GROUND PROCESSING REQUIREMENTS

( X ) Experiment/Facility Preintegration ( ) Experiment/Facility Preparation ( ) Postmission Requirements
Description of Planned Activities: Rack Integration, Rack Functional Tests, SSFF Systems Integrated Tests
Total Floor Space Required Including Space for GSE: 2000 ft ²
Ceiling Height Required: 10 ft
Overhead Crane Required: X Yes No Hook Height 8 ft
Facility Power Required:  208 V, 3 F, 60 Hz Other
Other Facility Support: Gases  GN ₂ Liquids <u>Single Phase</u> GHe <u>Precooled</u> GAr Other <u>H₂Q</u>
Environment: X Standard Other
Hazardous Operations:Y e sX No
Total Anticipated Use Time: 45 Days
Other Facility Support Description:
GSE Test sets including the following interface simulators:
* Furnace Module-to-Experiment  * Core Rack-to-Experiment Rack  * Experiment Rack-to-Core Rack  * SSF-to-Core Rack  * Experiment Rack Subsystem-to-Furnace Module

#### TABLE 1.9-2. SSFF INTEGRATION REQUIREMENTS

Description of Special Alignment, Calibration, Servicing, or Performance Verification and Estimated Time to Perform:
* Vent & Purge test of Furnace Module-1 - 60 min
* Calibration of Analog Sensors - 90 min
r . I
Identification of Any Constraints on Experiment/Facility Operations During Tests:
None Identified
Description of Time-Critical Operations and Time Constraints:
None Identified
·

#### 1.9.1.5 SSFF Facility Checkout

Following checkout of the individual racks, an overall SSFF integrated systems test will be performed. Tests will be limited to verify Core Rack-to-Experiment Rack-1 interfaces and to SSF.

#### 1.9.2 KSC VERIFICATION

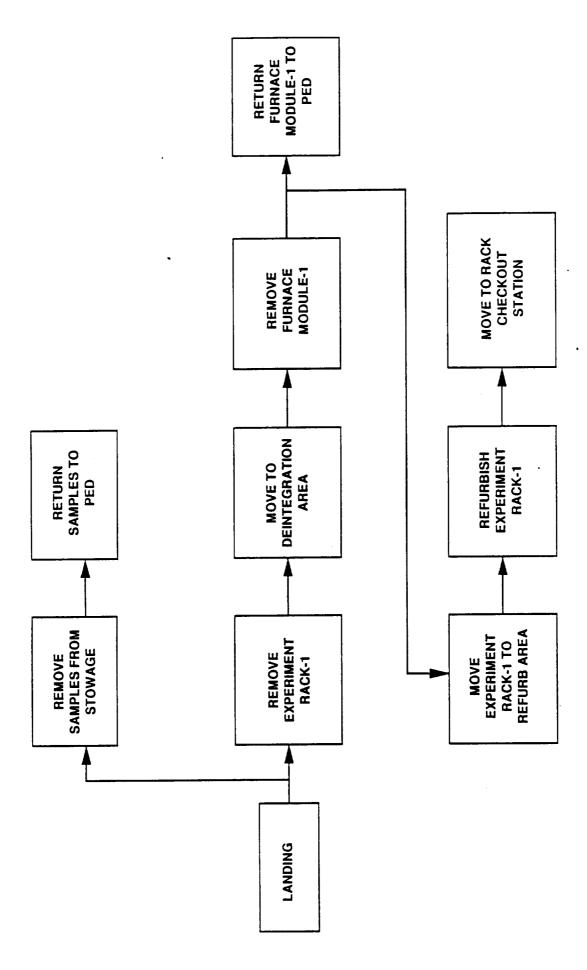
Physical integration at KSC will be limited to receiving/inspection of the SSFF hardware complement and to reverification of the physical and functional interfaces with the SSF.

#### 1.9.3 POSTLANDING

Postlanding activities consist of the following: (1) Removing the SSFF equipment and experiment samples from the returning Mini-Pressurized Logistics Module (MPLM); (2) returning the Furnace Module-1 samples to the Payload Investigator; (3) removing the Furnace Module-1 from Experiment Rack-1 and returning it to the PED; and (4) refurbishing Experiment Rack-1. These activities are shown in Table 1.9-3 and Figure 1.9-2.

### TABLE 1.9-3. SSFF POSTLANDING GROUND PROCESSING REQUIREMENTS

( ) Experiment/Facility Preintegration ( ) Experiment/Facility Preparation ( X ) Postmission Requirements
Description of Planned Activities: Remove flight samples from stowage and return to Experimenter. Remove flight rack from MPLM. Remove furnace module from experiment rack and return to PED. Move experiment rack to the rack refurb area and refurbish experiment rack. Ship rack to the rack integration and checkout area.
Total Floor Space Required including Space for GSE: 2000 ft ²
Ceiling Height Required: 10 ft .
Overhead Crane Required: X Yes No Hook Height 8 ft
Facility Power Required: 120 V, 1 F, 60 Hz N/A 208 V, 3 F, 60 Hz Other
Other Facility Support: Gases N/A GN ₂ Liquids N/A GHe Other
Environment: X Standard Other
Hazardous Operations: Yes <u>X</u> No
Total Anticipated Use Time: <u>3</u> Days
Other Facility Support Description:
Module shipping container Rack shipping container Rack rotation stand



			,	
•				
		•		
				•
		٠.		
				<u> </u>

#### 1.10. OPERATIONS SUPPORT

Table 1.10-1 describes the physical and operational support required at the Ground Science Operations Control Center during flight of the Space Station Furnace Facility (SSFF).

#### TABLE 1.10-1. SSFF MISSION OPERATIONS SUPPORT

# COMMUNICATIONS REQUIREMENTS: Downlink Data **TBD** Uplink Commands/data TBD Voice Communications **TBD** Video **TBD** SUPPORT EQUIPMENT: Description **TBD Dimensions** TBD **Power Requirements TBD** Data Interface TBD REMOTE SITE INTERFACE Location TBD Describe interfaces

TBD

## 1.11. TRAINING OBJECTIVES

Table 1.11-1 correlates the training requirements with the appropriate trainees and trainers, and identifies the source of the training requirements. Table 1.11-2 summarizes the requirements for each training objective.

TABLE 1.11-1. TRAINING PARTICIPATION

Trainee		•		Itly Defined				
Training Objectives	-PED/PI Defined		TBD	-PAM and PED/PI Jointly Defined	TBD	-PAM Defined	TBD	

TABLE 1.11-2. TRAINING OBJECTIVES (Sheet 1 of 4)

					SIM	SIMULATOR	R	
ON	TRAINING OBJECTIVE	TRAINEE	RESPON-	N/A	H/W	N/S	PROVIDER	COMMENTS
			SIBILIII		FIDELITY	N/X		
1.0	SCIENCE BACKGROUND							•
1.1	Present science basis and significance of the SSFF	payload crew, cadre	PED/PI	z				
1.2	Present operational objectives	payload crew, cadre	PED/PI	z				
1.3	Present SSFF operational theory	payload crew, cadre	PED/PI	z				
4.	Present operations philosophy	payload crew, cadre	PED/PI	z				
2.0	SSFF SYSTEMS FAMILIARIZATION							
2.1	Characterize the SSFF hardware elements	payload crew, cadre	PED/PI	>	ra -	<b>&gt;</b>	PED/PI	
2.1.1	Rack location of the FM-1, rack location of the Core							
2.1.2	FM-1 and subsystem components							
2.1.3	Module stowage							
2.1.4	2.1.4 DMS							

TABLE 1.11-2. TRAINING OBJECTIVES (Sheet 2 of 4)

with the following:  The FM-1 software with the following:  The FM-1 software with the following:  The FM-1 software with the following:  The FM-1 software payload crew, cadre ped./pl cadre payload crew, cadre ped./pl cadre payload crew, cadre ped./pl cadre payload crew, cadre ped./pl cadre payload crew, cadre ped./pl cadricements and thermal payload crew, cadre ped./pl cadricements and the following SSFF payload crew, cadre ped./pl cadricements and trequirements and trequirements and crew cadre ped./pl cadricements and trequirements and crew cadre ped./pl cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements and cadricements		TRAINING OBJECTIVE				SIM	SIMULATOR		
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	È		HANEE	RESPON- SIBILITY	z >	¥/	N/S	PROVIDER	COMMENTS
payload crew, cadre PED/PI Y  payload crew, cadre PED/PI Y  payload crew, cadre PED/PI Y  payload crew, cadre PED/PI Y  payload crew, cadre PED/PI Y	į					FIDELITY	Y/N		
payload crew, cadre  payload crew, cadre  payload crew, cadre  payload crew, cadre  payload crew, cadre  payload crew, cadre  payload crew, cadre	Charac	Renze FM-1 software ated with the following:	payload crew, cadre	PED/PI	>	ಇ	>	PED/PI	
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	DMS								
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	FM-1 (	command capabilities							
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	In-flig	nt computer requirements							
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	Timeli	ne requirements							-
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	Furna								
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	Chare	sclerize FM-1 data collection	payload crew, cadre	PED/PI	>	В	>	PED/PI	
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	Onbo	ard routing/recording							
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	Down	kink data and voice		_					
payload crew, cadre PED/PI Y payload crew, cadre PED/PI Y	Chare	acterize FM-1 GSE	payload crew, cadre	PED/PI	>	Ø	>	PED/PI	
payload crew, cadre PED/PI	Chara	acterize SSF interface	payload crew, cadre	PED/PI	>	æ		PED/PI	
payload crew, cadre PED/PI	Powe	r, fluids, and thermal aces						* ************************************	
fic attitudes or conditions gravity requirements ng crew motion and g-level	Chara opera const	tcterize the following SSFF lifonal requirements and raints:	payload crew, cadre	PED/PI	>			PED/PI	
gravity requirements ng crew motion and g-level	Speci	fic attitudes or conditions					<del></del>		
	Micro (limitir consti	Microgravity requirements (limiting crew motion and g-level constraints)	٠.					•	

TABLE 1.11-2. TRAINING OBJECTIVES (Sheet 3 of 4)

					SIMU	SIMULATOR		
NO.	TRAINING OBJECTIVE	TRAINEE	RESPON-	N/N	M/H	M/S	PROVIDER	COMMENTS
			SIBILLIY		FIDELITY	N/X		
3.0	FM-1 OPS FAMILIARIZATION							
3.1	Characterize FM-1 nominal operating procedures	payload crew, cadre	PED/PI				PED/PI	
3.1.1	Power on							
3.1.2	Sample changeout							
3.1.3	Power off							
3.1.4	FM-1 safing and stowage		•					
4.0	<b>├</b>							
4.1	Provide proficiency training in FM-1 operations	payload crew, cadre	PI/PAM	>			PED/PI/ PAM	
4.2	Characterize malfunction/ alternate procedures including	payload crew, cadre	PI/PAM	>			PED/PI/ PAM	
5.0	INTEGRATED TIMELINE PROFICIENCY				<del></del> -			
5.1	Provide additional proficiency training in FM-1 ops as it relates to the joint operations	payload crew, cadre	PI/PAM	<b>&gt;</b>			PED/PI/ PAM	
5.2	Provide additional training as it pertains to off-nominal procedures for joint operations	payload crew, cadre	PI/PAM	>			PED/PI/ PAM	
5.3	Provide proficiency training in integrated FM-1 ops including harware/software, SSF/Orbiter/PI interfaces	payload crew, cadre	PI/PAM	>			PED/PI/ PAM	

TABLE 1.11-2. TRAINING OBJECTIVES (Sheet 4 of 4)

6.0 SIMULATIONS 6.1 Conduct MSFC simulations in payload order to develop proficiency in the following: console operations, handover, voice protocols, crew/cadre/MCC interfaces, integrated payload operations, STS/SSF payload contingency operations 6.2 Conduct joint integrated simulations in order to demonstrate proficiency in the following: console positions, handover, voice protocols, crew/cadre/MCC interfaces, payload operations, furnace contingency operations, data retrieval systems, operational interfaces between ground control facilities, mission flight rules 7.0 MISSION-INDEPENDENT TRAINING 7.1 Provide STS/SSF mission- paylo						SIMU	SIMULATOR			_
SIMULATIONS  Conduct MSFC simulations in order to develop proficiency in the following: console operations, handover, voice protocols, crew/cadre/MCC interfaces, integrated payload operations, STS/SSF payload contingency operations  Conduct joint integrated simulations in order to demonstrate proficiency in the following: console positions, handover, voice protocols, crew/cadre/MCC interfaces, payload operations, furnace contingency operations, furnace contingency operations, furnace contingency operations, furnace contingency operations, furnace contingency operations, furnace control facilities, mission flight rules  MISSION-INDEPENDENT  TRAINING  Provide STS/SSF mission-independent training		IVE	TRAINEE	RESPON. SIBILITY	N/X	M/H	M/S	PROVIDER	COMMENTS	
Conduct MSFC simulations in order to develop proficiency in the following: console operations, handover, voice protocols, crew/cadre/MCC interfaces, integrated payload operations, STS/SSF payload contingency operations  Conduct joint integrated simulations in order to demonstrate proficiency in the following: console positions, handover, voice protocols, crew/cadre/MCC interfaces, payload operations, furnace contingency operations, data retrieval systems, operational interfaces between ground control facilities, mission flight rules  MISSION-INDEPENDENT  TRAINING  Provide STS/SSF mission-independent training						FIDELITY	Y/N			
Conduct MSFC simulations in order to develop proficiency in the following: console operations, handover, voice protocols, crew/cadre/MCC interfaces, integrated payload operations, STS/SSF payload contingency operations  Conduct joint integrated simulations in order to demonstrate proficiency in the following: console positions, handover, voice protocols, crew/cadre/MCC interfaces, payload operations, furnace contingency operations, data retrieval systems, operational interfaces between ground control facilities, mission flight rules  MISSION-INDEPENDENT  TRAINING  Provide STS/SSF mission-independent training	LATIONS									
contingency operations  Conduct joint integrated simulations in order to demonstrate proficiency in the following: console positions, handover, voice protocols, crew/cadre/MCC interfaces, payload operations, furnace contingency operations, data retrieval systems, operational interfaces between ground control facilities, mission flight rules  MISSION-INDEPENDENT TRAINING Provide STS/SSF mission- independent training	not MSFC simulation to develop proficieny llowing: console lions, handover, voi lions, crew/cadre/MC/ces, integrated paylions, STS/SSF paylions	s in cy in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in co in c	payload crew, cadre	PAM	>			PED/PI/ PAM		
Conduct joint integrated simulations in order to demonstrate proficiency in the following: console positions, handover, voice protocols, crew/cadre/MCC interfaces, payload operations, furnace contingency operations, data retrieval systems, operational interfaces between ground control facilities, mission flight rules  MISSION-INDEPENDENT  TRAINING  Provide STS/SSF mission-independent training	gency operations	2								
MISSION-INDEPENDENT TRAINING Provide STS/SSF mission- independent training	uct joint integrated titions in order to nestrate proficiency in ing: console positioner, voice protocols adre/MCC interface ad operations, furnary gency operations, dal systems, operationices between groun il facilities, mission fil	n the virs, s.s. s.s. cee lata lata ight		•						<del></del>
Provide STS/SSF mission-independent training	ION-INDEPENDEN IING	1								,
	le STS/SSF mission endent training	<u>.</u>	payload crew	PAM/JSC						
7.2 Provide mission-independent cadrePI training	le mission-independ g	dent	cadrePI/Sim Team	PAM	z					

## 1.12. ENVIRONMENTAL CONTAMINATION DATA REQUIREMENTS

Tables 1.12-1 and 1.12-2 illustrate the environmental contamination data requirements for the Space Station Furnace Facility (SSFF).

TABLE 1.12-1. FLIGHT ENVIRONMENT LIMITS

	SEI	SENSITIVITY LIMIT	TY LIM	L.		EXPERIMENT GENERATED		
	OPER/	ERATING	NON- OPER- ATING	- N. N. D. N.		OPERATING .	NC OP AT	NON- OPER- ATING
	NIM	MAX	NIE E	MAX	Z Z	MAX	Z	MAX
PARTICULATES Size (micrometers)						<ul> <li>&lt;1 micron normal operations</li> <li>0.1 to 50 microns following filter changeout</li> </ul>	•	
Number/m ³						• <1,000 normal operations • <100,000 following filter changeout		
Composition						Ceramic fibers, copper, steel, platinum, wire insulation, organic particles, and sample-sourced materials, including molybdenum, boron nitride, nickel alloys, quartz, silica, and semiconductor materials		
GASES Composition						•Cabin air, or inert pressurant with cleaning solvents and/or water contaminant		
Concentration						TBD		
Pressure (kN/m²)						<ul> <li>&lt;101.3 for experiment venting</li> <li>66.7 for vent of inert pressurants</li> </ul>		

## TABLE 1.12-2. EXTERNAL CONTAMINATION SOURCES

Do	es experiment/facility release (ven	t, purge) any material overboard on orbit?  Yes No _X
	PARAMETER	DESCRIPTION
	FOs of Occurrence	
	Frequency .	
	Duration	
	Composition	
	Phase State (solid, liquid, or gas)	

Quantity or Rate of Release

			<u> </u>
		•	
	·		<u> </u>
	•		
	·		
			)
		•	

# DATA REQUIREMENT (DR) - 10

# EXPERIMENT/FACILITY REQUIREMENTS DOCUMENT FOR THE SPACE STATION FURNACE FACILITY

SECTION 2: FURNACE MODULE-1 INPUT

MAY 1992

			<u> </u>
	•		
			<u> </u>
	÷		
			$\smile$

#### **FOREWORD**

The Space Station Furnace Facility (SSFF) Core is designed to accommodate and support a variety of furnace modules throughout the operational lifetime of the facility. Since the SSFF will be operational for 30 years, and various furnace modules will be accommodated, the Experiment/Facility Requirements Document (E/FRD) is divided into two separate sections. Section 1 describes the integrated SSFF-to-SSF interface, which includes the SSFF Core subsystem requirements and the furnace module requirements based on the information obtained from the Furnace Developer's Section 2, and Section 2 describes the furnace module-to-SSFF interface. Multiple Section 2s may be required for each E/FRD, depending on how many furnace modules the SSFF will accommodate per mission, since a separate Section 2 will be written for each furnace module. Both sections will be replaced for each mission with the appropriate mission-peculiar furnace module and interface requirements.

This section describes the Furnace Module-1 requirements. Furnace Module-1 is scheduled to be an upgrade of the present Crystal Growth Furnace (CGF), and this section reflects the requirements of that module.

				<u> </u>
		·		
			•	
•				
				)

#### TABLE OF CONTENTS

SEC1	NOL	TITLE	PAGE
2.1	FUNC	TIONAL OBJECTIVES AND EQUIPMENT IDENTIFICATION	. 2.1-1
	2.1.1	System Description	. 2.1-1
	2.1.2	Functional Objectives	. 2.1-3
	2.1.3	Equipment Identification	. 2.1-3
	2.1.4	Operational Functional Flows	. 2.1-3
2.2	STRUC	CTURAL/MECHANICAL	. 2.2-1
	2.2.1	Equipment List and Mass Properties	. 2.2-1
	2.2.2	Interface Detail	. 2.2-1
		2.2.2.1 Furnace Module-1 to SSFF Experiment Rack-1 Interface	2.2-1
		2.2.2.2 Furnace Module-1 Cooling Jacket-to-SSFF TCS	2.2-1
		2.2.2.3 Furnace Module-1 Electrical Connection-to-SSFF PCDS	
		2.2.2.4 Furnace Module-1 to SSFF-Supplied Argon and Nitrogen	
		2.2.2.5 Furnace Module-1 to SSFF-Supplied Vacuum Vent	2.2-5
		2.2.2.6 Furnace Module-1 DMS Connections-to-SSFF DMS	
		2.2.2.7 Furnace Module-1 Software-to-SSFF Software	2.2-5
		2.2.2.8 Furnace Module-1 to Crew Interface	2.2-5
2.3	POINT	TING/STABILIZATION AND ALIGNMENT	2.3-1
2.4		TAL REQUIREMENTS AND CONSTRAINTS	2.4-1
2.5	ELEC	TRICAL REQUIREMENTS	2.5-1
2.6	THER	MAL/FLUID REQUIREMENTS	2.6-1
	2.6.1	Heat Transfer Characteristics	
	2.6.2	Fluid/Vent Requirements	
2.7	DATA	SYSTEM REQUIREMENTS	
	2.7.1	Signal Interface Definition	2.7-1
	2.7.2	Signal Interface Definition Expansion	2.7-1
	2.7.3	Event/Exception Monitoring Requirements	
	2.7.4	POIC Display Requirements	
	2.7.5	POIC Limit Sensing/Exception Monitoring Requirements	2.7-1
2.8	FLIGH	HT SOFTWARE REQUIREMENTS	
	2.8.1	Command Support	
	2.8.2	Data Acquisition	
	2.8.3	Data Processing	
	2.8.4	Data Routing/Formatting	
	2.8.5	Downloading Application Software and Data	
	286	Downloading Ancillary Data	2.8-1

#### TABLE OF CONTENTS (Cont.)

SECT	ION	TTTLE	<u>PAGE</u>
	2.8.7	FDIR Support	2.8-1
	2.8.8	Operating System Services	2.8-2
	2.8.9	Health and Status Data	2.8-2
2.9	PHYSI	CAL INTEGRATION	2.9-1
2.10	OPER.	ATIONS SUPPORT	2.10-1
2.11	TRAIN	ING OBJECTIVES	2.11-1
	2.11.1	PI/PED Defined Training	2.11-1
	2.11.2	PIM and PI/PED Jointly Defined Training	2.11-4
	2.11.3	PIM Defined Training	2.11-6
		2.11.3.1 Increment Independent Training - Crew	2.11-6
		2.11.3.2 Increment Independent Training - PI/PED Team	2.11-6
		2.11.3.3 Increment Independent Training - POIC Cadre	2.11-6
	2.11.4	Training Simulation	2.11-6
	2.11.5	Training Participation	2.11-7
2.12	ENVIR	ONMENTAL CONTAMINATION DATA REQUIREMENTS	2.12-1

## LIST OF FIGURES

FIGURE	<u>tttle</u>	<u>PAGE</u>
2.1-1	Furnace Module-1 Pictorial Representation	2.1-2
2.1-2 ·	Furnace Module-1 Component Tree	2.1-20
2.1-3	Furnace Module-1 to SSFF/SSF Interface Diagram	2.1-21
2.2-1	Furnace Module-1 EAC Connector Locations	2.2-4
2.5-1	Power Profiles by FOs	2.5-2
2.9-1	Physical Integration Flow	2.9-2

## LIST OF TABLES

TABLE	TITLE	<u>PAGE</u>
2.1-1	Furnace Module-1 Functional Objectives	2.1-4
2.1-2	Functional Objective Requirements Sheets	2.1-7
2.1-3	Furnace Module-1 Operational Flow	2.1-22
2.2-1	List of Equipment Properties	2.2-2
2.2-2	Furnace Module-1 Stowage List	2.2-3
2.6-1	On-Orbit Thermal Requirements	2.6-2
2.6-2	Fluid Requirements	2.6-3
2.7-1	Signal Interface Definition	2.7-2
2.7-2	Signal Interface Definition Expansion	2.7-3
2.7-3	Event/Exception Monitoring	2.7-41
2.7-4	POIC Display Requirements	2.7-42
2.7-5	POIC Limit Sensing/Exception Monitor Requirements	2.7-62
2.9-1	Furnace Module-1 Ground Processing Requirements	2.9-3
2.9-2	Furnace Module-1 Integration Requirements	2.9-5
2.10-1	Furnace Module-1 Mission Operations Support	2.10-2
2.11-1	Training Participation	2.11-2
2.11-2	Furnace Module-1 Training Objectives	2.11-3
2.11-3	Knowledge Levels	2.11-5
2.11-4	Skill Proficiency Levels	2.11-5
2.12-1	Flight Environmental Limits	2.12-3
2.12-2	External Contamination Sources	2.12-3
2.12-3	On-Orbit External Contamination Control Sensitivity	2.12-4

## 2.1. FUNCTIONAL OBJECTIVES AND EQUIPMENT IDENTIFICATION

#### 2.1.1 SYSTEM DESCRIPTION

The function of Furnace Module-1 is to grow crystals of semiconductor materials and metal and alloys using the directional solidification and vapor transport crystal growth techniques in a microgravity environment (at temperatures up to 1600 °C). Directional solidification is achieved by melting the sample and solidifying the same while applying a thermal gradient along the longitudinal axis of the sample and translating the furnace or the sample. In the case of Furnace Module-1, the furnace is translated.

The Furnace Module-1 system is shown in Figure 2.1-1. It consists of the following primary elements: the Sample Ampoule/Cartridge Assembly (SACA), the base ring, and the experiment apparatus container (EAC) in which the reconfigurable furnace module (RFM), the furnace translation mechanism (FTM), the sample exchange mechanism (SEM), the sample insertion port (SIP) and the internal support structure (ISS) are housed. The ISS, in addition to providing the structural support for the RFM, the FTM, and attach hardware for the plumbing, provides an interface for the SEM which will have the capability to hold up to six sample ampoules. The bottom section of the EAC is attached to the base ring, which includes the feedthroughs for power, data, fluid, and vent lines.

The Space Station Furnace Facility (SSFF) Thermal Control Subsystem (TCS) water loop will provide cooling for the RFM outer shell, the FTS stepping motor, and the SEM ampoule holding head.

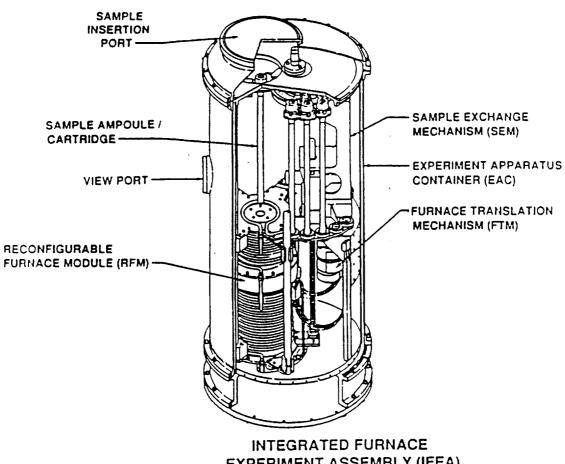
The SSFF Gas Distribution Subsystem (GDS) will supply argon and nitrogen to the EAC in order to provide an inert processing atmosphere for crystal growth.

The SACA consists of a sealed ampoule in which the experiment sample material is contained. The SACA accommodates up to six sample thermocouples and has interfaces for sample ampoule/cartridge failure detection sensors.

At least three levels of containment will be provided during sample processing: The SACA, negative  $\Delta P$  inside the EAC during processing, and the EAC.

At least two levels of containment will be provided during manual sample exchange: The SACA and the flexible glovebox container.

Multiple purge/vent/backfill will be performed prior to manual sample exchange. In addition, a view port is provided on the EAC for visual inspection of the sample ampoules by a crew-member. It is also planned to mount mirrored witness plates inside the EAC to augment



**EXPERIMENT ASSEMBLY (IFEA)** 

FIGURE 2.1-1. FURNACE MODULE-1 PICTORIAL REPRESENTATION

visual inspection for detecting any vapor deposition that may have resulted from the sample ampoule/cartridge failure. The design will be compatible with the SSFF.

## 2.1.2 FUNCTIONAL OBJECTIVES

There are nine functional objectives (FOs) for Furnace Module-1 which are structured as one FO for sample exchange, one FO for venting and purging, five FOs for sample processing, one FO for sample loading or shutdown, and one FO for calibration/bakeout. The actual FO numbering is as follows:

- FO-3 Furnace Module-1 Sample Exchange
- FO-4 Furnace Module-1 Vent/Purge
- FO-5 Furnace Module-1 Process Sample HgCdTe
- FO-6 Furnace Module-1 Process Sample HgZnTe
- FO-6A Furnace Module-1 Process Sample Extended HgZnTe
- FO-7 Furnace Module-1 Process Sample CdTe
- FO-8 Furnace Module-1 Process Sample GaAs
- FO-9 Configure Furnace Module-1 for Sample Loading or Shutdown
- FO-11 Furnace Module-1 Process Calibration/Bakeout

Table 2.1-1 shows a listing of the Furnace Module-1 FOs along with the equipment associated with each step of each FO. Step duration, crew time requirements, and average power requirements for each step of each FO are defined in Table 2.1-2, Functional Objective Requirements Sheets.

#### 2.1.3 EOUIPMENT IDENTIFICATION

Figure 2.1-2 identifies the Furnace Module-1 components in a block diagram format. Figure 2.1-3 identifies the Furnace Module-1 to SSFF interfaces.

#### 2.1.4 OPERATIONAL FUNCTIONAL FLOWS

Preliminary functional flows are shown in Table 2.1-3 for each FO. Functional flows define the function performed, the performing element, and decisions involved in accomplishing each FO.

TABLE 2.1-1. FURNACE MODULE-1 FUNCTIONAL OBJECTIVES (Sheet 1 of 3)

	FUNCTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ITEM
FO-3	Manual Sample Exchange	Crew Interaction Required
Step 1	Command Manual Exchange	DMS
Step 2	Vent/Fill EAC	GDS
Step 3	Equalize EAC Pressure	GDS, DMS
Step 4	Prep Equipment	
Step 5	Open SIP	EAC
Step 6	Insert Samples	EAC
Step 7	Close Sip	EAC
Step 8	Open Valves	
Step 9	Command Man. Exchange Off	DMS
Step 10	Perform Seal Check	DMS, GDS
Step 11	Load List process	DMS
FO-4	Purge EAC	
Step 1	GN ₂ Purge Furnace	DMS, GDS
Step 2	Argon Backfill	DMS, GDS
Step 3	Command Sample Process	DMS
Step 4	TCS Configured	TCS
FO-5	Vapor Crystal Growth of HgCdTe	
Step 1	Activate Furnace for Processing	GDS, TCS, DMS
Step 2	Activate and Process Heat Cycle	GDS, TCS, DMS
Step 3	Anneal Sample	GDS, TCS, DMS
Step 4	Initiate Vapor Crystal Growth Processing	GDS, TCS, DMS
Step 5	Cool Sample and Extract	GDS, TCS, DMS
Step 6	Cool and Stow	, 22,22
	·	

TABLE 2.1-1. FURNACE MODULE-1 FUNCTIONAL OBJECTIVES (Sheet 2 of 3)

F	UNCTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ITEM
FO-6	Meltback and Regrowth of HgZnTe	
Step 1	Activate Furnace for Processing	GDS, TCS, DMS
Step 2	Process Heat Cycle	GDS, TCS, DMS
Step 3	Initial Soak	GDS, TCS, DMS
Step 4	Translation to Growth Position	GDS, TCS, DMS
Step 5	Final Soak	GDS, TCS, DMS
Step 6	Directional Solidification	GDS, TCS, DMS
Step 7	Cool Sample	GDS, TCS, DMS
Step 8	Stow Sample	GDS, TCS, DMS
FO-6A	Meltback and Regrowth of HgZnTe (extended)	
Step 1	Activate Furnace for Processing	GDS, TCS, DMS
Step 2	Process Heat Cycle	GDS, TCS, DMS
Step 3	Initial Soak	GDS, TCS, DMS
Step 4	Translation to Growth Position	GDS, TCS, DMS
Step 5	Final Soak	GDS, TCS, DMS
Step 6	Directional Solidification	GDS, TCS, DMS
Step 7	Cool Sample	GDS, TCS, DMS
Step 8	Stow Sample	GDS, TCS, DMS
FO-7	Growth of CdTe by Dir. Solidification	
Step 1	Activate Furnace for Processing	GDS, TCS, DMS
Step 2	Process Heat Cycle	GDS, TCS, DMS
Step 3	Soak	GDS, TCS, DMS
Step 4	Process Sample, Directional Solidification	GDS, TCS, DMS
Step 5	Cool Sample to 400 °C	GDS, TCS, DMS
Step 6	Cool Sample to 200 °C and Stow Sample	GDS, TCS, DMS
Siep 0		

TABLE 2.1-1. FURNACE MODULE-1 FUNCTIONAL OBJECTIVES (Sheet 3 of 3)

	FUNCTIONAL OBJECTIVE	EQUIPMENT REQUIRED
NUMBER	TITLE	ITEM
FO-8	Growth of GaAs by Dir. Solidification	
Step 1	Activate Furnace Processing	GDS, TCS, DMS
Step 2	Preheat Cycle	GDS, TCS, DMS
Step 3	Process Heat Cycle	GDS, TCS, DMS
Step 4	Soak	GDS, TCS, DMS
Step 5	Translate Furnace/Process Sample	GDS, TCS, DMS
Step 6	Cool Down to 800 °C	GDS, TCS, DMS
Step 7	Cool Down to 200 °C and Stow	GDS, TCS, DMS
FO-9	Configure Furnace for Shutdown/Sample Loading	
Step 1	Verify Furnace Is in Home Position	DMS
Step 2	Furnace Specific Tests	DMS
Step 3	Secure Power From Furnace Module	DMS
FO-11	Furnace Calibration/Bakeout	
Step 1	Activate Calibration/Bakeout	DMS
Step 2	Initiate Calibration	DMS
Step 3	Bakeout/Calibration Process	DMS
	·	
	·	

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 1 of 13)

O NAM	MENI W	-m <u>-</u>		IV				3		
NO. OF	M. P. • M. H	nual S	pace Station Furnace Facili ample Exchange		PRERECUISITE. I O-2					
	PERFOR	MANCE	ES: MINDES	SEQUENCE:						
REQUIR			(MET): MIN MAX			JOINT	OPS WIT	H:		
TEP N	IUMBER			1	2	3	4	5	6	
			MINIMUM							
	DURATI S:SECS)	ON [	MAXIMUM						20.22	
(141110.0200)			PREFERRED	1:00	32:00	10:00	10:00	7:00	20:00	
	MINIMUM									
	DELAY :MINS)		MUMIXAM							
(IIII)	.m.,,		PREFERRED							
	REW		NUMBER		<b> </b>			1	1	
J			PREFERRED	1	<b></b>	1	1	<del>                                     </del>	-	
MICR	OGRAVIT	Y (g's)		<del>                                     </del>	-	1		-		
VACL	JUM VEN	IT			<del> </del>		<del> </del>		-	
CONSUMABLES				<b></b>		-	0	0	-	
AVERAGE POWER REQUIRED (kW)			0	0	°		-	<u> </u>		
ONBOARD CORE APPLICATIONS			ļ			-				
	PUTER PORT	EXPER	MENT APPLICATIONS							
	ŧ		GITAL (MBPS)		ļ	ļ				
			OR DUMP (D)			<del> </del>				
	COMMA		), MPAC (M), POCC (PC)							
DATA	VIDEO		DISTANDARD NTSC							
	l									
SPECI	<u> </u>		UMP/STORE OR CONSTRAINTS							
				STEP	ESCRIPTI	ON				
<u>s</u> i	TEP NO.	Comm	nand "Manuai Sample Exchange"			<del></del>				
	2		ill furnace module							
	3	Equal	ize furnace module pressure							
	4		equipment							
	5	Open								
	6	Insert	samples							

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 2 of 13)

			Space Station Furnace Fac						
				PREREQUISITE:F0-2 SEQUENCE:					
			ICES: MINDES.						
r E G	חות שחות	MEFKAI	ME (MET): MIN MAX.	•		NIOL	T OPS WIT	гн:	
STEP	NUMBER	?		7	8	9	10	11	
CTE	D DUDA	TION	MINIMUM						
STEP DURATION (MINS:SECS)			MAXIMUM						
			PREFERRED	3:00	3:00	1:00	65:00	4:00	
			MINIMUM						
	P DELAY S:Mins)	<b>,</b>	MAXIMUM						
	•		PREFERRED						
(	CREW		NUMBER						
			PREFERRED	1	1	1	1	1	
MICE	ROGRAVI	TY (gʻs	3)						
VAC	UUM VE	NT							
CON	SUMABL	.ES							
AVE	RAGE PO	WER	REQUIRED (KW)	0	0	0	0	0	
ONBOARD CORE APPLICATIONS									
	PORT		RIMENT APPLICATIONS						
			GITAL (MBPS)						
			OR DUMP (D)						
	COMMA		, MPAC (M), POCC (PC)						
DATA	VIDEO	132 (1)	, MPAC (M), POCC (PC)						
		RD/NO	NSTANDARD NTSC						
	REAL-TI	ME/DU	MP/STORE						
SPECIA	L EQUIP	MENT	OR CONSTRAINTS					Ì	
SI	EP NO.			STEP DE	SCRIPTION	<u></u>		<b>-</b>	
	7	Close S	SIP			•			
	8	Open valves							
	9 Command "Manual Sample Exchange" of		ff						
	10 Perform seal check								
	11		t process						

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 3 of 13)

XPERI	MENT NAME	: Space Station Furnace Facili	ty			UMBER: 4		
O NAI	ME: <u>Purge</u>	Furnace Module						
		NCES: MINDES				OPS WIT		
REQUIR	RED TIMEFRA	ME (MET): MIN MAX						
TEP N	IUMBER		1	2	3	4	5	6
		MINIMUM						
	DURATION S:SECS)	MAXIMUM						
(MINS:SECS)		PREFERRED	32:00	10:00	2:00	2:00		
	MINIMUM							<del> </del>
	DELAY	MAXIMUM						
(HRS:MINS)		PREFERRED						
CREW		NUMBER						
C	n 6 W	PREFERRED				<b> </b>		-
MICR	OGRAVITY (	g's)		<del> </del>		<del> </del>		
VAC	JUM VENT			<del> </del>				+
CON	SUMABLES							-
AVE	RAGE POWE	R REQUIRED (kW)	0	0	0	0	<del> </del>	+
ONBOARD CORE APPLICATIONS			<u> </u>	ļ	<del> </del>	<b></b>	+	
COM	PUTER EXI	PERIMENT APPLICATIONS			<u> </u>		ļ	
	1	DIGITAL (MBPS)				<del> </del>		1
		RT) OR DUMP (D)		<del> </del>	-	+	+	+
	COMMANDI	·		<del> </del>	<del>                                     </del>	+	1	
DATA		E (I), MPAC (M), POCC (PC)	+	+	·			
	VIDEO STANDARD	NONSTANDARD NTSC		<del>-</del>			-	<del>                                     </del>
•	REAL-TIME	DUMP/STORE						
SPECI	AL EQUIPME	ENT OR CONSTRAINTS			<u> </u>			
e1	TEP NO.		STEP D	ESCRIPTION	ON			
ليو		N2 purge furnace						
	2 A:	gon backfill						
		ommand sample process						
		CS configured						
	<del>-</del> ''	ਚ ਜ਼ੁਰੂਰ <b>ਾ ਗੁ</b> ਲਾ ਹਨ						

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 4 of 13)

EXPE	EXPERMENT NAME: Space Station Furnace Facility FO NUMBER: 5								
FO N	IAME:	Vapor (	Crystal Growth of HgCdTe	PREREQUISITE:FO-3					
NO.	OF PERF	ORMAN	CES: MINDES			SEQ	JENCE:		
REQU	JIRED TIM	IEFRAL	AE (MET): MIN MAX	<del></del>		JOIN	r ops wit	Ή:	
STEP	NUMBER	1		1	2	3	4	5	6
	MINIMUM								
STEP DURATION (MINS:SECS)		–	MAXIMUM						
	PREFERRED		3:00	188:00	60:00	480:00	240:00	21:00	
	MINIMUM								
	P DELAY S:MINS)	,	MAXIMUM						
			PREFERRED						
	CREW		NUMBER						•
			PREFERRED						
MIC	ROGRAVI	TY (g's	3)						
VAC	UUM VE	NT							
CO	SUMABI	.ES							
AVE	RAGE PO	OWER	REQUIRED (kW)	.120	1.116	.466	.466	.120	.120
	BOARD	CORE	APPLICATIONS						
i e	PORT	EXPER	RIMENT APPLICATIONS						
	DOWNL	NK DI	GITAL (MBPS)						
			OR DUMP (D)						
	COMMA								
DATA		ISE (I	), MPAC (M), POCC (PC)						
	VIDEO STANDA	RD/NO	NSTANDARD NTSC						
	REAL-T	IME/DU	JMP/STORE	;					
SPECI	AL EQUI	PMENT	OR CONSTRAINTS						
ST	EP NO.			STEP DE	SCRIPTION	4			
	1	Activat	e furnace for processing						
	2 Activate and process heat cycle								
	3 Anneal sample								
	4	Initiate	vapor crystal growth processing						
	5	Cool sa	ample and extract						
	6	Cool au	nd stow						

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 5 of 13)

						EO N	IIMRED.	6		
			Space Station Furnace Facili							
			k and Regrowth of HgZnTe CES: MINDES							
			CES: MINUES IE (MET): MIN MAX		•			H:		
REQUI	HED IME	FRAM	IS (MSI): MINMAA							
STEP !	NUMBER			1	2	3	4	5	6	
			MINIMUM							
	DURATI S:SECS)	ON	MAXIMUM						7000.00	
•			PREFERRED	3:00	340:00	120:00	125:00	600:00	7390:00	
			MINIMUM		<u> </u>					
	DELAY		MAXIMUM							
(AKS	:MINS)		PREFERRED							
	DEM	•	NUMBER							
C	REW		PREFERRED							
MICR	OGRAVIT	Y (gʻ	5)		<u> </u>					
VACI	UUM VEN	T								
CON	CONSUMABLES									
AVE	AVERAGE POWER REQUIRED (kW)			.120	.598	.516	.516	.516	.516	
ONB	ONBOARD CORE APPLICATIONS						ļ	<u> </u>		
	PORT	EXPE	RIMENT APPLICATIONS							
	DOWNL	NK D	IGITAL (MBPS)							
			T) OR DUMP (D)		-	<del> </del>		<del> </del>		
	COMMA					-			+	
DATA		ISE	(I), MPAC (M), POCC (PC)		-		<del>                                     </del>		1	
	VIDEO STANDA	RD/N	ONSTANDARD NTSC			<del> </del>				
	REAL-T	ME/C	UMP/STORE					<u> </u>		
SPECI	AL EQUI	PMEN	T OR CONSTRAINTS							
\$1	EP NO.			STEP D	ESCRIPTION	<u> N</u>				
	1	Activ	rate furnace for processing							
	2	Proc	ess heat cycle							
	3	Initia	i soak							
	4	Tran	slation to growth position							
	5	Final	I soak							
	6	Dire	ctional solidification							
1	_									

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 6 of 13)

			Space Station Furnace Facil						
•			k & Regrowth of HgZnTe						
•			CES: MINDES			SEQ	JENCE: _		<del></del> [
REQU	JIRED TIM	EFRAN	ME (MET): MIN MAX.	<del></del>		JOIN.	r ops wi	тн:	
STEP	NUMBER			7	8				
e T E	D DUDAT	FION	MINIMUM			<del></del>			
STEP DURATION (MINS:SECS)			MAXIMUM						
			PREFERRED	372:00	115:00				
			MINIMUM	-					
	P DELAY S:MINS)		MAXIMUM						
			PREFERRED						
•	CREW		NUMBER						
			PREFERRED						
MIC	ROGRAVI	ΓΥ (g's	9)						
VAC	UUM VE	T							
CON	SUMABL	.ES							
AVE	RAGE PO	WER	REQUIRED (kW)	.191	.061				
	ONBOARD CORE APPLICATIONS		APPLICATIONS						
	PORT	EXPE	RIMENT APPLICATIONS						
	1		GITAL (MBPS)						
			OR DUMP (D)				. <del>-</del> ·		
	COMMA							<u> </u>	
DATA		ISE (I	), MPAC (M), POCC (PC)						
•	VIDEO STANDA	RD/NO	NSTANDARD NTSC						
	REAL-T	ME/D	JMP/STORE						
SPECI	AL EQUI	MENT	OR CONSTRAINTS						
SI	EP NO.			STEP DE	SCRIPTION				
	7	Cool sa	ample			_			
8 Stow sample			ample						
									ľ
									1

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 7 of 13)

									l
EXPERI	MENT N	AME:	Space Station Furnace Facili	ity				6 A	t t
FO NA	ME: <u>M</u>	itbac	k and Regrowth of HgZnTe	(Extended)				: <u>FO-3</u>	
			CES: MINDES					Н:	
REQUIF	RED TIME	FRAM	IE (MET): MIN MAX			JOINI	OPS WII	n:	
STEP N	UMBER			1	2	3	4	5	6
			MINIMUM						
	DURATI	ON	MAXIMUM						
(MINS	(MINS:SECS)		PREFERRED	3:00	340:00	120:00	125:00	600:00	59957:00
	MINIMUM STEP DELAY MAXIMUM								
			MAXIMUM						
(HKS	:MINS)		PREFERRED						
	OEM		NUMBER						
	REW		PREFERRED						
MICR	OGRAVIT	'Y (g'	s)	<u> </u>		<del> </del>			
VAC	JUM VE	IT.			<b> </b>				<u> </u>
CON	CONSUMABLES				ļ			510	516
AVE	AVERAGE POWER REQUIRED (kW)			.120	.598	.516	.516	.516	.516
	ONBOARD CORE APPLICATIONS						<b> </b>		
	PUTER	EXPE	FRIMENT APPLICATIONS						
	DOWNL	NK D	IGITAL (MBPS)					ļ	
	REALTI	AE (R	T) OR DUMP (D)		<del> </del>		<del> </del>	1	
	COMMA	NDIN	G 447.40 (41) 2000 (50)		<del> </del>	<del> </del>	+		<b>†</b>
DATA		, ISE	(I), MPAC (M), POCC (PC)		+	1	1	1	
	STAND	ARD/N	IONSTANDARD NTSC			-			-
	REAL-1	IME/	DUMP/STORE					<del>                                     </del>	
SPECI	AL EQU	PMEN	IT OR CONSTRAINTS					<u> </u>	
\$1	EP NO.			STEP	ESCRIPTI	ON			
	1	Activ	vate furnace for processing						•
	2	Proc	cess heat cycle						
	3 Initial soak				•				
	4 Translation to growth position								
	5 Final soak								
	6	Dire	ectional solidification						
1									

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 8 of 13)

EXPERMENT NAME: Space Station Furnace Facility FO NUMBER: 6A										
			k and Regrowth of HgZnT					E: <u>FO-3</u>		
NO.	OF PERF	ORMAN	ICES: MINDES	•						
REQ	REQUIRED TIMEFRAME (MET): MIN MAX JOINT OPS WITH:  STEP NUMBER 7 8									
STEP	NUMBER	₹		7	8					
			MINIMUM							
	STEP DURATION (MINS:SECS) MAXIMUM									
	PREFERRED				115:00					
	MINIMUM									
STE (HR	P DELAY S:MINS)	<b>'</b>	MAXIMUM						1	
•			PREFERRED							
	CREW		NUMBER							
			PREFERRED							
MIC	ROGRAVI	TY (g'i	3)							
VAC	UUM VE	NT								
COI	SUMABL	.ES								
AVE	RAGE PO	WER	REQUIRED (kW)	.191	.061					
ONBOARD CORE APPLICATIONS										
	PORT		RIMENT APPLICATIONS							
	L	INK DIGITAL (MBPS)								
			OR DUMP (D)							
	COMMA									
DATA	VIDEO	ES (P), ISE (I), MPAC (M), POCC (PC)								
		RD/NO	NSTANDARD NTSC				•			
	REAL-T	ME/DU	JMP/STORE							
SPECI	AL EQUIF	MENT	OR CONSTRAINTS							
<u>s</u> 1	EP NO.			STEP DE	SCRIPTION					
	7	Cool sa	ample			-	•			
	8	Interna	ily stow sample						İ	
•										
			•							
									ļ	

TÀBLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 9 of 13)

EXPERMENT NAME: Space Station Furnace Facility  FO NAME: Growth of CdTe by Directional Solidification  NO. OF PERFORMANCES: MIN DES  REQUIRED TIMEFRAME (MET): MIN MAX JOINT OPS WITH:											
REQUIRE	ED TIMER	FRAME (MET): MIN MAX.			JOIN I						
STEP NU	JMBER		11	2	3	4	5	6			
		MINIMUM			-						
STEP DURATION (MINS:SECS)		MUMIXAM					100.00	208:00			
PREFERRED		PREFERRED	3:00	538:00	120:00	4278:00	438:00	208:00			
		MINIMUM									
STEP DELAY (HRS:MINS)  PREFERRED											
		PREFERRED									
<u></u>	EW	NUMBER									
"	C 11	PREFERRED									
MICRO	GRAVITY	(g's)				<u> </u>					
VACUL	JM VENT										
CONS	UMABLE	:\$									
AVERA	AGE POV	WER REQUIRED (kW)	.120	1.345	1.241	1.166	.591	.241			
ONBO	ONBOARD CORE APPLICATIONS										
COMPLITED		EXPERIMENT APPLICATIONS									
T	OOWNLIN	K DIGITAL (MBPS)			ļ	ļ					
	REALTIME	E (RT) OR DUMP (D)					-	<b></b>			
1 1	COMMAN			ļ		-	<u> </u>	<u> </u>			
DAIA		ISE (I), MPAC (M), POCC (PC)									
	VIDEO Standai	RD/NONSTANDARD NTSC			<b>↓</b>	<u> </u>	ļ				
	REAL-TI	ME/DUMP/STORE									
SPECIA	L EQUIP	MENT OR CONSTRAINTS			<u></u>		<u> </u>				
STE	P NO.		STEP_D	STEP DESCRIPTION							
	1	Activate furnace module for processing	ļ								
1	2	Process heat cycle									
	3 Soak										
	4 .	Process sample, directional solidification	on								
	5	Cool sample to 400 °C									
	6	Cool sample to 200 °C and internally str	ow sample			•					

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 10 of 13)

FO N NO. C REQU	AME: <u>(</u> OF PERFO	Growth DRMAN IEFRAN	Space Station Furnace Facil of GaAs by directional Solid CES: MIN DES AE (MET): MIN MAX	ification		PREF SEQU	UMBER: IEQUISITE JENCE: OPS WIT	:FO-3	6		
STEP DURATION (MINS:SECS) MAXIMUM											
			PREFERRED	3:00	45:00	227:00	68:00	720:00	210:00		
			MINIMUM								
(HRS:MINS)		'	MAXIMUM								
			PREFERRED	•							
CREW NUMBER		NUMBER									
PREFERRED											
MICI	ROGRAVI	TY (g'ı	3)								
VAC	UUM VE	NT		<u> </u>							
CONSUMABLES											
AVERAGE POWER REQUIRED (kW)			.120	.858	2.353	1.344	1.259	.668			
ONBOARD CORE APPLICATIONS COMPUTER SUPPORT EXPERIMENT APPLICATIONS											
		EXPE	RIMENT APPLICATIONS		:						
	DOWNL	NK DI	GITAL (MBPS)								
	REALTIA	IE (RT	OR DUMP (D)								
	COMMA										
DATA	VIDEO		), MPAC (M), POCC (PC)								
			NSTANDARD NTSC								
	REAL-T	IME/D	UMP/STORE								
SPECI	AL EQUI	PMENT	OR CONSTRAINTS								
ST	EP NO.			STEP DESCRIPTION							
Activate furnace module processing					_						
2 Preheat cycle											
	3 Process heat cycle										
	4	Soak	•						-		
	5		ate furnace/process sample								
6 Cool down to 800 ℃						•			ł		

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 11 of 13)

NAM	IE: Gro	wth_	Space Station Furnce Faciliof GaAs by Directional Solices: MINDES.	dification	cation						
o. of Equir	PERFOR	FRAM	IE (MET): MIN MAX.	-	JQINT OPS WITH:						
EP N	UMBER			7				<b></b> -			
			MINIMUM			<b> </b>					
STEP DURATION (MINS:SECS)		NC	MUMIXAM			<del> </del>					
			PREFERRED.	466:00							
			мінімим								
STEP	DELAY		MAXIMUM			<b></b>					
(HKS	:MINS)		PREFERRED			<u> </u>					
	0.534		NUMBER					_			
C	REW		PREFERRED				<b>}</b>				
MICR	OGRAVIT	Y (g	<b>'s</b> )					_			
VACI	JUM VEN	T									
CON	SUMABL	ES					<del> </del>				
AVE	RAGE PO	WER	REQUIRED (kW)	.120	<u> </u>		<del> </del>		_		
ONBOARD CORE APPLICATIONS COMPUTER SUPPORT EXPERIMENT APPLICATIONS					<u> </u>	_					
		EXP	ERIMENT APPLICATIONS								
		OWNLINK DIGITAL (MBPS)					<u> </u>				
		REALTIME (RT) OR DUMP (D)			<b>↓</b>			<del>-  </del>			
	COMMA				<b></b>						
DATA	PES (P)	PES (P), ISE (I), MPAC (M), POCC (PC)				_	+				
	VIDEO	VIDEO STANDARD/NONSTANDARD NTSC									
	REAL	REAL-TIME/DUMP/STORE									
SPEC	AL EQU	PME	NT OR CONSTRAINTS		<u> </u>						
S	<b>TEP NO.</b>		ol down to 200 °C and internally s	STEP_D	ESCRIP	TION					
						•					
1											

TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 12 of 13)

FO	NAME:	Conflat	Space Station Furnace Fac	ampie loadi	ing			9			
			ICES: MINDES.			SEQ	JENCE: _				
			ME (MET): MIN MAX.			JOIN.	OPS WIT	ГН:	<del></del>		
STEP	NUMBER	}		1	2	3	4	5	6		
e T E	D DUDA	T1011	MINIMUM								
	STEP DURATION (MINS:SECS) MAXIMUM										
	PREFERRED				5:00	1:00					
			MINIMUM								
	STEP DELAY MAXIMUM (HRS:MINS)										
			PREFERRED								
	CREW		NUMBER					•			
	PREFERRED						***				
MIC	ROGRAVI	TY (g's	3)								
VAC	UUM VE	NT									
CON	SUMABL	.ES									
AVE	RAGE PO	WER	REQUIRED (kW)	0	0	0					
ONBOARD CORE APPLICATIONS											
	PORT		MENT APPLICATIONS								
	4		SITAL (MBPS)					····			
			OR DUMP (D)								
	COMMA										
DATA	VIDEO	ISE (I)	, MPAC (M), POCC (PC)								
		RD/NO	NSTANDARD NTSC								
	REAL-TI	ME/DU	MP/STORE								
SPECI	AL EQUIP	MENT	OR CONSTRAINTS								
SI	EP NO.			STEP DESCRIPTION							
	1	Verify fu	amace is in home position			•			į		
2 Furnace specific tests											
	3	CCU se	cures power from furnace module								
			•								
									1		

# TABLE 2.1-2. FUNCTIONAL OBJECTIVE REQUIREMENTS SHEET (Sheet 13 of 13)

EXPER	MENT NA	· \ME:	Space Station Furnace Facili	ty				11					
	FO NAME: Furnace Calibration/Bakeout						<del></del> -						
NO. 0	F PERFOR	MAN	CES: MINDES			PREREQUISITE: FO-3 SEQUENCE:  JOINT OPS WITH:  3 4 5 6  00 300:00							
REQUI	RED TIME	FRAM	IE (MET): MIN MAX.	<del></del>		JOINT	OPS WIT	H:					
STEP I	NUMBER			1	2	3	4	5	6				
			MINIMUM										
STEP DURATION (MINS:SECS)		ON	MAXIMUM										
			PREFERRED	1:00	1:00	300:00							
			MINIMUM										
	STEP DELAY (HRS:MINS)		MAXIMUM										
(1113	; mins;		PREFERRED										
	REW		NUMBER										
C	, n <b>s W</b>		PREFERRED										
MICE	OGRAVIT	Y (g':	s)										
VAC	UUM VEN	T	•										
CON	SUMABL	ES		<u> </u>									
AVE	AVERAGE POWER REQUIRED (kW)			2.1336	2.1336	2.330							
	ONBOARD CORE APPLICATIONS												
COMPUTER SUPPORT EXPE		EXPE	RIMENT APPLICATIONS										
	DOWNLIN	IK DI	GITAL (MBPS)										
		REALTIME (RT) OR DUMP (D)		ļ									
	1	COMMANDING PES (P), ISE (I), MPAC (M), POCC (PC)			<del></del>								
DATA	VIDEO	155	(I), MPAC (M), FOCC (FC)	1									
1	– – .	RD/N	ONSTANDARD NTSC	·	<u> </u>								
	REAL-TI	ME/D	UMP/STORE										
SPECI	AL EQUIF	MEN.	T OR CONSTRAINTS		<u> </u>	<u> </u>							
SI	EP NO.			STEP D	ESCRIPTIO	<u>N</u>							
	1	Activ	ate calibration/bakeout										
2 Initiate calibration													
	3	Bake	out/calibration process										

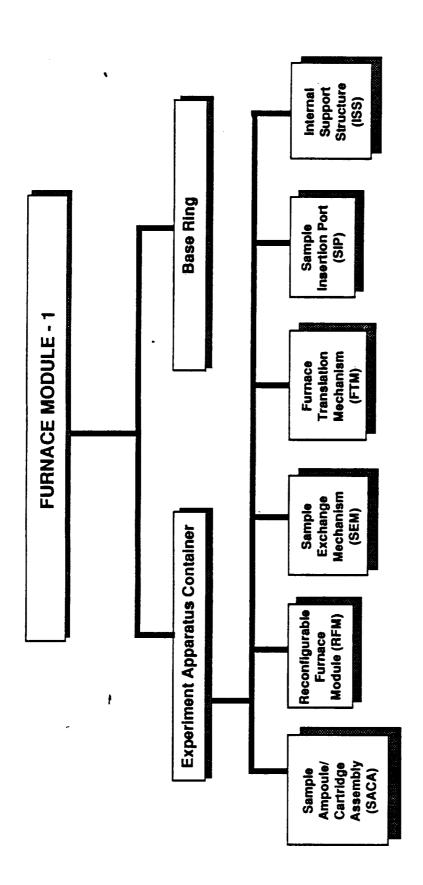


FIGURE 2.1-2. FURNACE MODULE-1 COMPONENT TREE

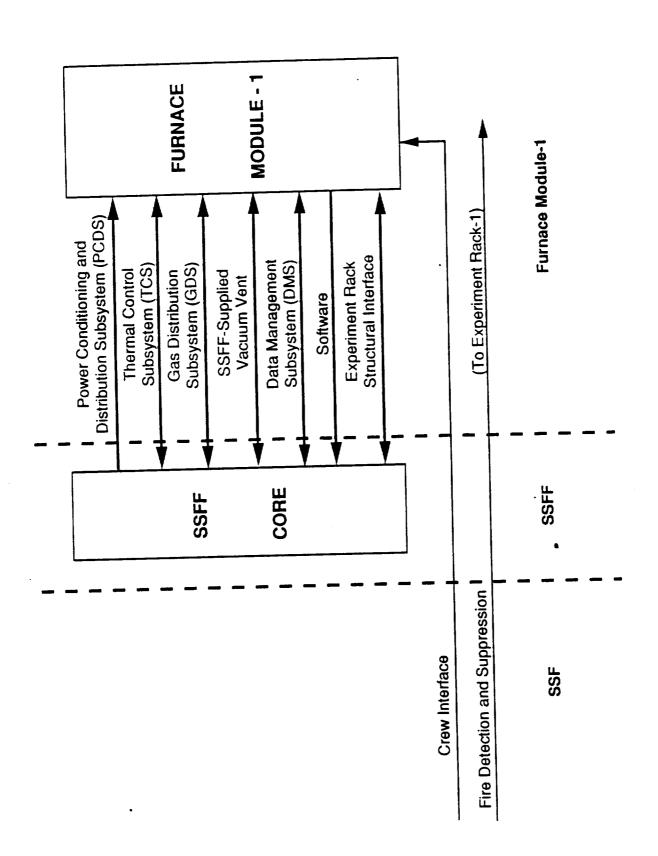
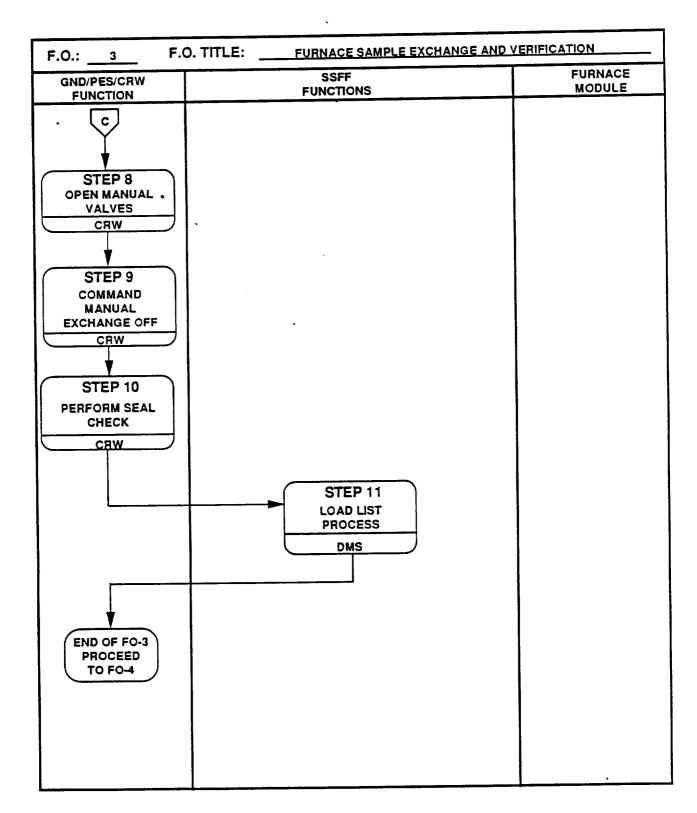


FIGURE 2.1-3. FURNACE MODULE-1 TO SSFF/SSF INTERFACE DIAGRAM

FO: FO TITLE: 3 FURNACE SAMPLE EXCHANGE AND VERIFICATION **CREW** SSFF **FURNACE FUNCTION FUNCTIONS** MODULE STEP 1 STEP 2 COMMAND INITIATE MANUAL VENT/FILL **VENT/FILL EXCHANGE** FURNACE CRW DMS STEP 3 CLOSE VALVES/ **EQUALIZE FURNACE** PRESSURE CRW STEP 4 PREP **EQUIPMENT** CRW STEP 5 **OPEN SIP** CRW STEP 6 **INSERT SAMPLES** CRW STEP 7 **CLOSE SIP** CRW

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 1 of 12)

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 2 of 12)



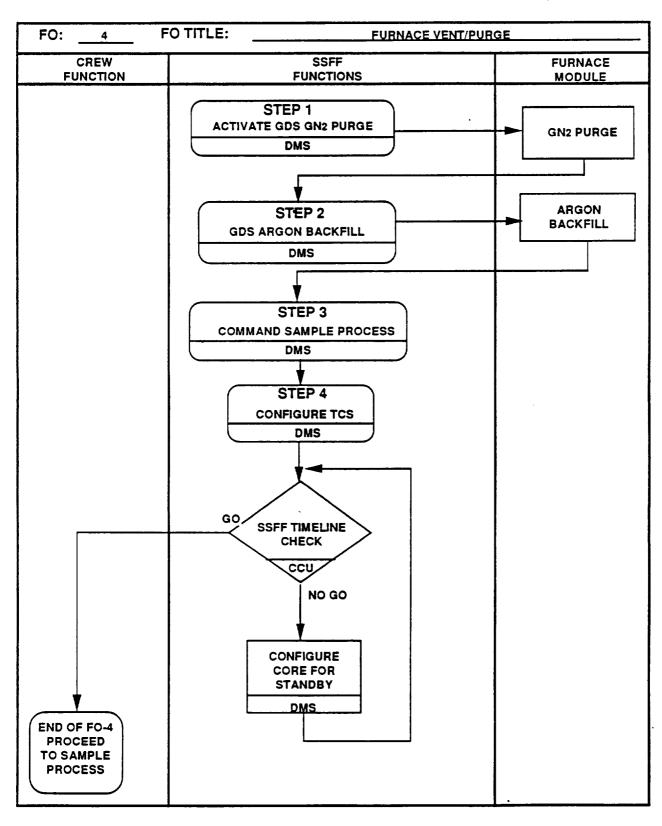


TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 3 of 12)

SAMPLE HaCdTe FO TITLE: FO: 5 FURNACE SSFF CREW MODULE **FUNCTIONS FUNCTION** STEP 1 COMMAND FURNACE PROCESS DMS STEP 2 **PROCESS ACTIVATE HEAT CYCLE** HEAT CYCLE DMS STEP 3 ANNEAL ACTIVATE SAMPLE ANNEALING SAMPLE DMS STEP 4 **PROCESS** INITIATE VAPOR CRYSTAL GROWTH VAPOR CG DMS COOL DOWN STEP 5 AND EXTRACT INITIATE COOLDOWN SAMPLE DMS STOW SAMPLE STEP 6 **ACTIVATE STOWAGE** DMS END OF FO-5 PROCEED TO NEXT SAMPLE OR PURGE

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 4 of 12)

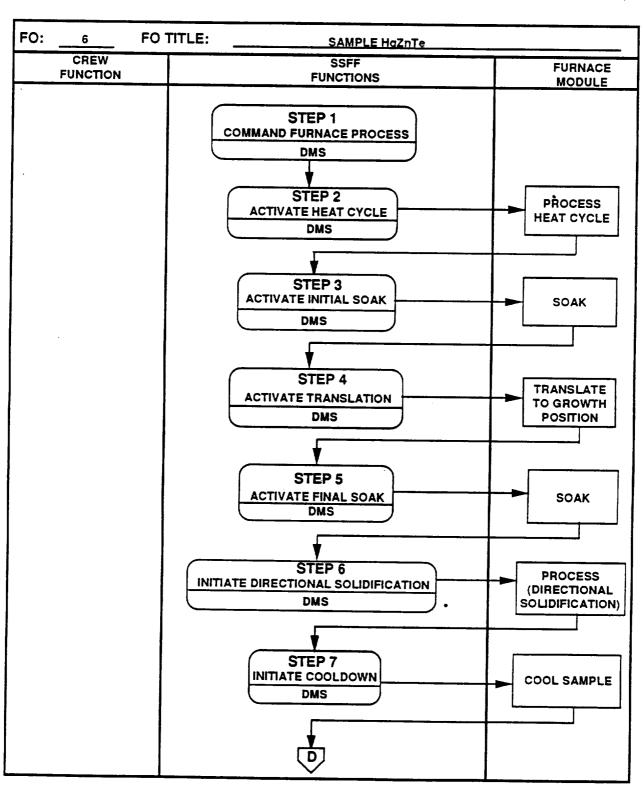
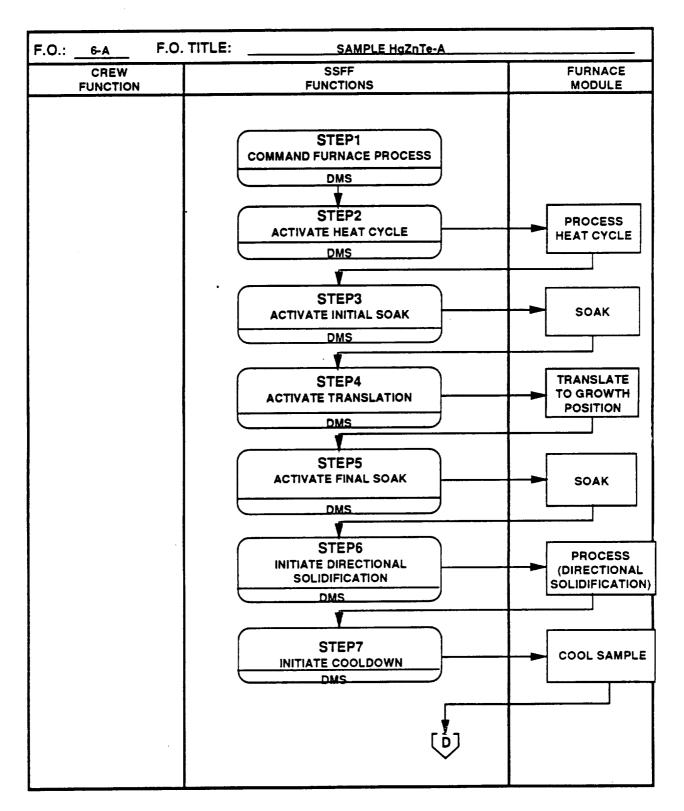


TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 5 of 12)

FO TITLE: SAMPLE HgZnTe FO: 6 **FURNACE** SSFF CREW MODULE **FUNCTIONS FUNCTION** D STEP 8 ACTIVATE STOW SAMPLE STOWAGE DMS END OF FO-6 PROCEED TO NEXT SAMPLE OR PURGE

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 6 of 12)

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 7 of 12)



SAMPLE HaZnTe-A FO TITLE: FO: 6-A FURNACE SSFF CREW MODULE **FUNCTIONS FUNCTION** D STEP 8 ACTIVATE STOW SAMPLE STOWAGE DMS END OF FO-6A PROCEED TO NEXT SAMPLE OR PURGE

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 8 of 12)

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 9 of 12)

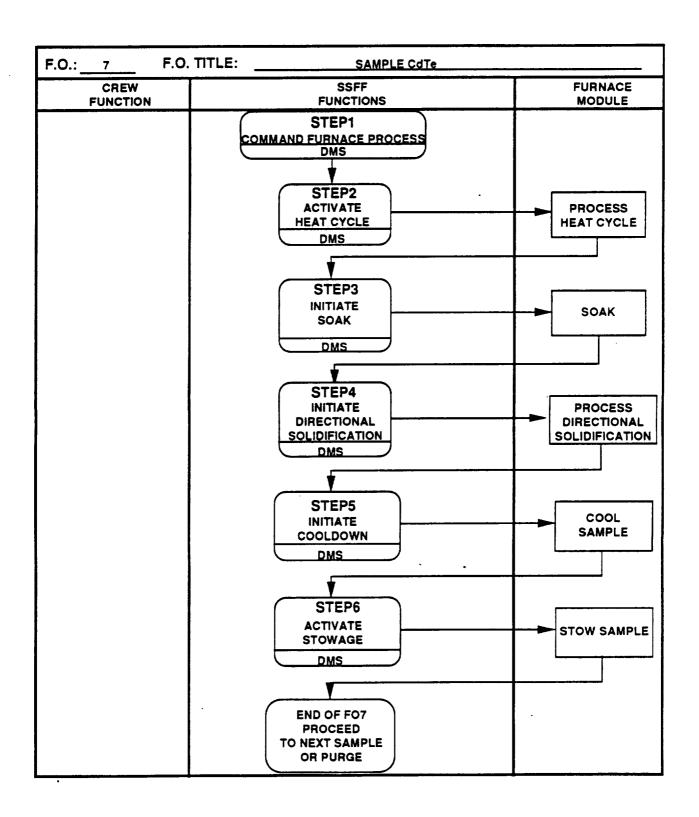


TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 10 of 12)

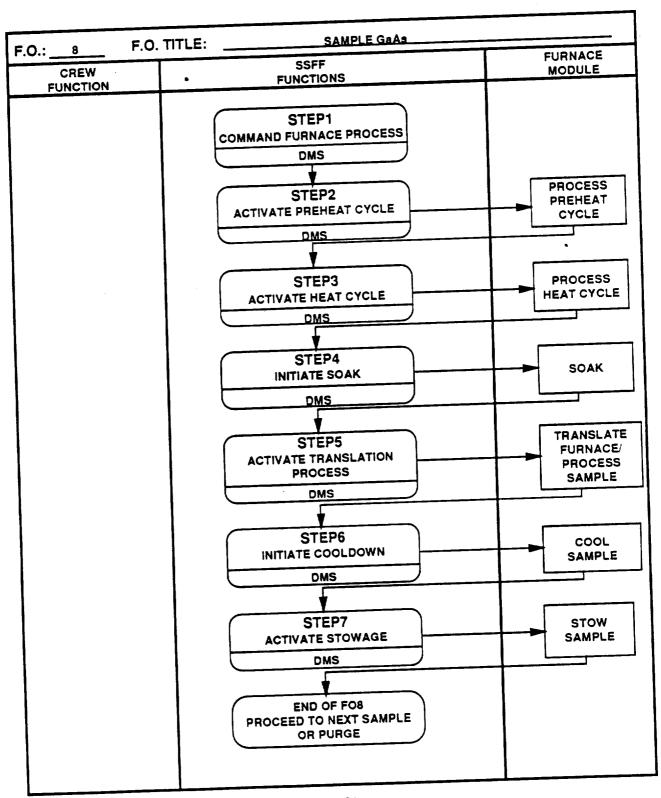
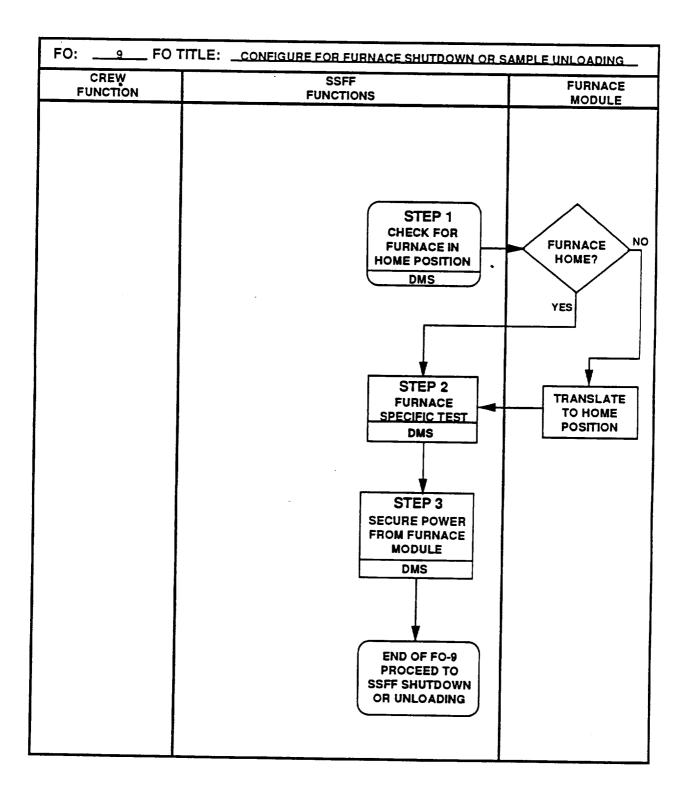


TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 11 of 12)



FURNACE CALIBRATION/BAKEOUT F.O. TITLE: F.O.: _ FURNACE SSFF MODULE CREW FUNCTIONS **FUNCTION** STEP1 ACTIVATE CALIBRATION/ BAKEOUT DMS STEP2 PROCESS CALIBRATION INITIATE CALIBRATION DMS STEP3 **PROCESS** ACTIVATE BAKEOUT BAKEOUT DMS END OF FO11 PROCEED TO NEXT SAMPLE OR PURGE

TABLE 2.1-3. FURNACE MODULE-1 OPERATIONAL FUNCTIONAL FLOW (Sheet 12 of 12)

. .

### 2.2. STRUCTURAL/MECHANICAL

Furnace Module-1 will be mounted in the Space Station Furnace Facility (SSFF) Experiment Rack-1. The physical and functional interfaces defined herein between Furnace Module-1 and SSFF, and Furnace Module-1 and Space Station Freedom (SSF) are as follows:

- Furnace Module-1 to SSFF Experiment Rack-1
- Furnace Module-1 cooling jacket to SSFF Thermal Control System (TCS)
- Furnace Module-1 electrical connection to SSFF Power Conditioning and Distribution System (PCDS).
- Furnace Module-1 to SSFF-supplied argon and nitrogen
- Furnace Module-1 to SSFF-supplied vacuum vent
- Furnace Module-1 Data Management System (DMS) connections to SSFF DMS
- · Furnace Module-1 software to SSFF software
- Furnace Module-1 to crew interface

## 2.2.1 EQUIPMENT LIST AND MASS PROPERTIES

Mass properties of Furnace Module-1 are shown in Table 2.2-1. Stowage items and their properties are shown in Table 2.2-2.

#### 2.2.2 INTERFACE DETAIL

## 2.2.2.1 Furnace Module-1 to SSFF Experiment Rack-1

The Furnace Module-1 will interface with the experiment rack by way of the experiment apparatus container (EAC) base ring. The EAC connector locations for the TCS, PCDS, argon, nitrogen, vacuum vent, and DMS are identified in Figure 2.2-1. Further information on each of these interfaces is available in this section of this document.

All services will be provided to Furnace Module-1 by the Core Rack, except avionics air and fire detection and suppression, which will be provided at Experiment Rack-1 via the SSFF furnace interface panel. Other furnace-unique services which might be required will be the responsibility of the Furnace Developer and will be located in Experiment Rack-1.

### 2.2.2.2 Furnace Module-1 Cooling Jacket-to-SSFF TCS

Furnace Module-1 will interface with the SSFF TCS via quick disconnects located at the Furnace Module-1 base ring.

TABLE 2.2-1. LIST OF EQUIPMENT PROPERTIES

<del></del>	,				
ertial	Tyz		TBD	TBD	
Product of Inertial (kg-m2)	Ixz	TBD	TBD	TBD	
Prod	Ixy	TBD	TBD	TBD	
nertia	Zł	TBD	TBD	TBD	
Moment of Inertia (kg-m2)	ly.	TBD	TBD	TBD	
Mon	×	TBD	TBD	TBD	
avity n)	Z	TBD	TBD	TBD	
Center of Gravity Station (cm)	⊁	TBD	TBD	TBD	
Cente	×	TBD	TBD	TBD	
Mounting Preferred		TBD	TBD	TBD	
	act.	TBD	TBD	TBD	·
Mass Maturity (%)	cal.	TBD	TBD	TBD	•
Mas	est.	TBD	TBD	твр	
Mass (kg)		327.0	TBD	TBD	
Equipment Nomenclature		Furnace Module-1	Utilities Interface Panel	Interface Cables and Fluid Lines	•

TABLE 2.2-2. FURNACE MODULE-1 STOWAGE LIST

Special Requirements																·
၁ရှိ ၁	R		> >	77	~	>	7	7	7	7	>	> >	>>	<del>-</del>	 	
Stowage Phase										~	· ->-	> >	<del></del>		 	
			-												 ····	
Stowage Responsiblity	PE	•														
Sto Respo	Ex										<del>.</del>				 	
Dimensions (cm) LxWxH or LxDia		:-	73.7 x 13.2 dia.	TBD	24.1 x 2.1 X 1.9	5.1 x 1.7 dia.	$25.4 \times 1.3  \text{dia.}$	5.2 x 1.3 dia.	5.2 x 1.3 dia.	2.4 x 1.3 dia.	$14.0 \times 22.9 \times 3.8$	$15.2 \times 15.2 \times 0.5$ 16.2 × 5.2 dia.	3.2	20.6 x 9.1 dia.		
Mass Fach	(kg)		1.60	TBD	1BD 0.31	60.0	0.10	0.01	0.01	0.05	0.41	0.01	0.40	0.26	 	
Number	2011		10 Car	Jan .			_	_		-		10	• (	9		
ltem		Sample Ampoule/Cartridge Assembly with Stowage Bag	(5 flight and 5 spares)	Work Bag Glovebox Cover	Flexible Glovebox Torque Wrench, 1/4 in.	(30-200 in-lb) Socket, 1/2 in. deep,	(1/4-in. drive) Extender, 10 in.	(1/4-in. drive) Hex Head Driver, 5/32 in.	(3/8-in. drive) Hex Head Driver, 1/4 in.	(3/8-in. drive) Adapter, 1/4 to 3/8 in.	(1/4-in. drive)	Filter Test Bags	Torque Wrench (0-30 in-1b)	Transfer Units		

**TBD** 

FIGURE 2.2-1. FURNACE MODULE-1 EAC CONNECTOR LOCATIONS

# 2.2.2.3 Furnace Module-1 Electrical Connection-to-SSFF PCDS

The furnace module will interface with the SSFF PCDS via the furnace junction box located within Experiment Rack-1 to the Furnace Module-1 base ring connection.

# 2.2.2.4 Furnace Module-1 to SSFF-Supplied Argon and Nitrogen

Furnace Module-1 will interface with the SSFF Core Rack-supplied argon and nitrogen through a connection at the Furnace Module-1 base ring.

# 2.2.2.5 Furnace Module-1 to SSFF-Supplied Vacuum Vent

Furnace Module-1 will interface with the SSF-supplied vacuum vent through a connection at the Furnace Module-1 base ring.

# 2.2.2.6 Furnace Module-1 DMS Connections-to-SSFF DMS

The furnace module will interface with the SSFF DMS via the Furnace Data Acquisition and Control System (FDACS) located within Experiment Rack-1.

## 2.2.2.7 Furnace Module-1 Software-to-SSFF Software

The Furnace Module-1 software will require an interface with the SSFF software to support operation of the furnace module. This interface will include (1) downloading software and data to the Furnace Module-1 software; (2) collecting and processing (if necessary) data received from the Furnace Module-1 software; (3) responding to requests for SSFF resources such as power, gas, cooling, etc.; (4) retrieving stored data to be output to Furnace Module-1 for analysis; (5) network management of the local area network (LAN) connected to the Furnace Module-1 processor; (6) fault, detection, isolation, and recovery (FDIR) services; and (6) operating system services. Furnace Module-1 will also require interface from the SSFF software to the furnace heating system, the furnace translation system (if present), the furnace cavity pressure system, and the furnace current pulsing system.

## 2.2.2.8 Furnace Module-1 to Crew Interface

There are two ways the crew may interface with Furnace Module 1. The first way is through the top end of the EAC where the crew interfaces with the integrated furnace enclosure apparatus (IFEA) via the sample insertion port during manual sample exchange.

The second way the crew may interface with Furnace Module-1 is through the crew interface to the SSFF DMS (display and keyboard). Through the display and keyboard, a crewmember can direct the furnace to perform any number of operations including changing temperature profiles or rotating and loading a different sample into the processing position.

		•			
			•		
					_
·					
				•	
			,		
	-		,		
•					
		•			
•					

### 2.3. POINTING/STABILIZATION AND ALIGNMENT

Furnace Module-1 requires specific alignment of the center line of the sample during processing. This requirement is that the residual dc acceleration vector (i.e., dc component of the acceleration vector at the sample due to all factors such as drag, orbital mechanics, etc.) should be aligned with the center line of the sample precisely enough that the component of the acceleration perpendicular to the center line is less than  $10^{-7}$ g. The direction of the vector may be required to be from hot zone to cold zone of the furnace or the opposite direction. The required direction will be determined separately for each sample.

			·	
				$\sim$
	_			
	•			
				$\sim$
•				
	•			
		•		

# 2.4. ORBITAL REQUIREMENTS AND CONSTRAINTS

Furnace Module-1 requires specific Orbiter attitudes during processing in order to satisfy the requirement for orienting the reconfiguring furnace module (RFM) axis in relation to the residual dc acceleration vector. Details of the attitude requirements are to meet the requirements of Section 2.3.

				$\overline{}$
			•	
				<u> </u>
•				
	•			
	-			
•				
				<u> </u>

# 2.5. ELECTRICAL REQUIREMENTS

All power conditioning will be accomplished by Space Station Furnace Facility (SSFF) prior to any distribution to Furnace Module-1. Furnace Module-1 heaters will interface with the Power Conditioning and Distribution System (PCDS) at the furnace junction boxes. The operational power profile defining the use of the SSFF-provided power to Furnace Module-1 during each functional objective (FO) is shown in Figure 2.5-1. The power profile data shown in these figures represent power requirement estimates to cover any of the the SSFF-accommodated furnace needs. Only FO-5 through FO-8 power profiles are shown since no power is associated with the furnace in FO-3, FO-4, FO-9, or FO-11. The power levels defined in Figure 2.5-1 are considered maximums. Time duration for peak power requirements is 72 h. The maximum peak power required is 1650 W. The average power required is 570 W.

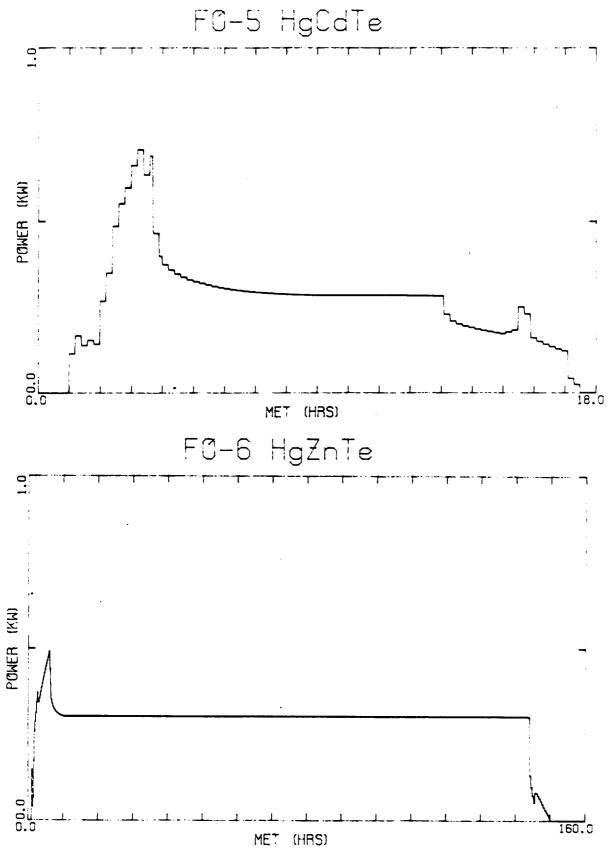
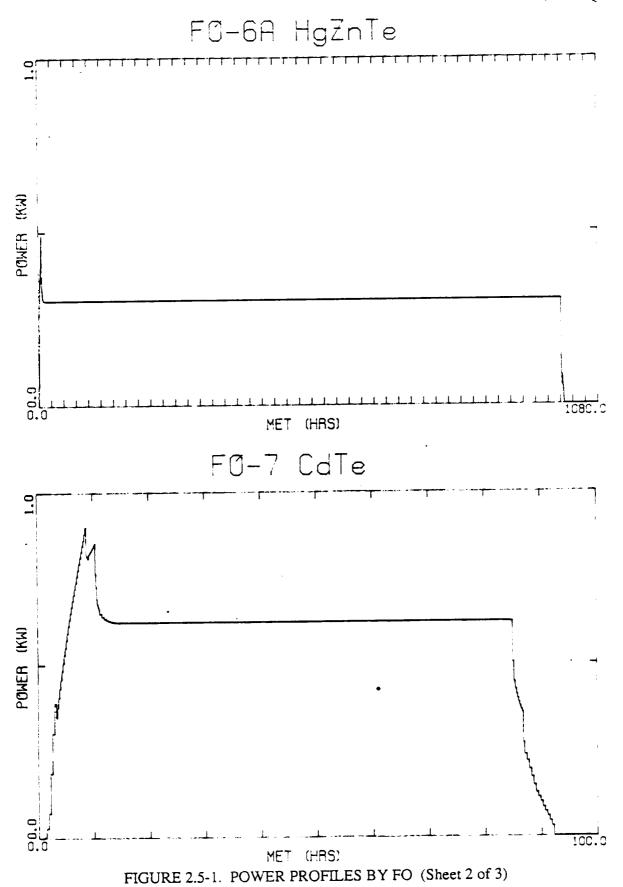


FIGURE 2.5-1. POWER PROFILES BY FO (Sheet 1 of 3)



2.5-3

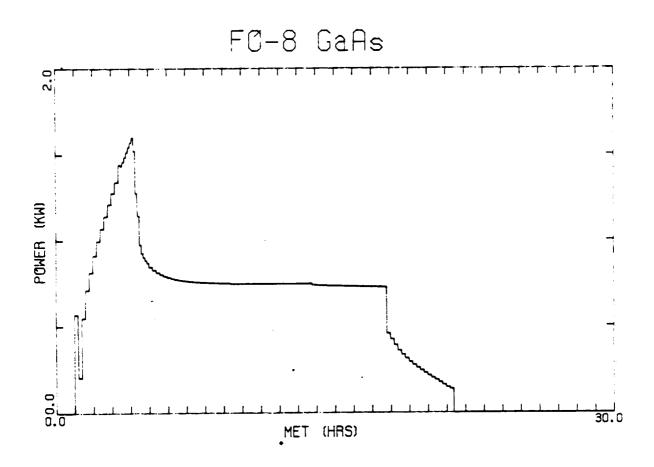


FIGURE 2.5-1. POWER PROFILES BY FO (Sheet 3 of 3)

## 2.6. THERMAL/FLUID REQUIREMENTS

## 2.6.1 HEAT TRANSFER CHARACTERISTICS

Furnace Module-1 utilizes the Space Station Furnace Facility (SSFF) water cooling loop for experiment cooling and will not require avionics air cooling. Thermal requirements for Furnace Module-1 are shown in Table 2.6-1. Maximum water-cooled heat dissipation from Experiment Rack-1 is 1500 W for Furnace Module-1. Required inlet temperature of the cooling water for Furnace Module-1 is 39.9 °C.

### 2.6.2 FLUID/VENT REQUIREMENTS

Furnace Module-1 requires an argon processing atmosphere. Argon required by Furnace Module-1 for the Integrated Configuration-1 (IC1) mission is 7.5 kg. The supplied argon is required to be research grade having the following contaminant levels:

99.9995 % pure	N ₂ < 3.0 ppm
CO ₂ < 0.5 ppm	$N_2O < 0.1 \text{ ppm}$
CO < 1.0 ppm	$O_2 < 1.0 \text{ ppm}$
H ₂ < 1.0 ppm	THC < 0.5 ppm
CH ₄ < 0.5 ppm	$H_2O < 0.5 \text{ ppm}$
dewpoint	=-112 °F

During nominal operating conditions, the vent products for Furnace Module-1 will be argon and nitrogen. Vent products during off-nominal conditions are TBD. Gas and vacuum requirements for Furnace Module-1 are shown in Table 2.6-2.

Furnace Module-1 has two paths to the SSF Vacuum System. The use of these paths is defined as follows:

- Path One Active Pressure Control
  - Path one is used for Gas Distribution System (GDS)-controlled, or nominal venting.
  - Path one requires access to the Space Station Freedom (SSF) Vacuum System during the sample processing phases of Furnace Module-1 operations.
  - Venting episodes using path one will be SSF timelined activities. Typical vents will occur every 15 min to 1 h.
- Path Two Emergency Pressure Relief
  - Path two provides for emergency relief of experiment apparatus container (EAC) overpressure through redundant pressure relief valves.
  - Path two must have access to the SSF Vacuum System during all on-orbit phases after installation into the U.S. Laboratory module.

TABLE 2.6-1. ON-ORBIT THERMAL REQUIREMENTS

_		7									
Special	Considerations (as applicable)										
Thermal	Capacitance (W-h-°C)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
(ټ)	Non- Operate	0/20	0/20	0/20	0/20	0/20	0/20	0/20	0/20	0/20	
Min/Max Temp (°C)	Орегаве	0/20	0/20	0/20	0/20	0/20	0/20	0/20	0/20	0/20	
/wiw/	Peak Operate or other Standby	0/20	0/20	0/20	0/20	0/20	0/20	0/20	0/20	0/20	
	Peak or other	0	0	270	285	285	280	<i>L</i> 69	0	0	
Cooling Load (W)		0	0	232	274	283	525	524	0	0	
Cooling	Standby	0	0	TBD	TBD	TBD	TBD	TBD	0	0	
	SSFF Core HX Standby	X	×	×	×	×	×	×	×	×	
k Type	Rack Air Rack Air Exp Coldplate nonducted) (ducted) (Module)										
Heat Sink Type	Rack Air (ducted)										
	Rack Air Rack Air Cabin (nonducted) (ducted)										
	Cabin										
Equipment	Item and FO No.	FO-3	FO-4	FO-5	FO-6	FO-6A	FO-7	FO-8	FO-9	FO-11	

TABLE 2.6-2. FLUID REQUIREMENTS

	Time of the control of		Gae or	Gas or Liquid Parameters	ırs		Vent			
Equipment Item and FO No.	Requirement (Pressure, Purge, Vent	Туре	Quantity Stored (kg)	Pressure Limits (N/m2)	Flow- rate (kg/h)	Pressure Drop (N/m2)	Pressure (N/m2)	When Required and Duration	Vacuum Vent Rate: torr-l/sec	Special Considerations (as applicable)
FO-3 Step 2	Vacuum Vent Argon	Argon	0	1.38×10 ⁵ >4.1	>4.1	TBD	0.133	TBD	1.2 × 10 ⁻³	
FO-4 Step 1 Step 2	Vacuum Vent Nitrogen Pressurize Argon	Nitrogen Argon	0	1.38×10 ⁵	TBD >4.1	TBD TBD	0.133	TBD	1.2 x 10 ⁻³ 1.2 x 10 ⁻³	
FO-5	A/X									
FO-6	N/A									
FO-6A	N/A									
FO-7	Z/A		•							
FO-8	A/A		<u></u>						(** ** **	
FO-9	Vent		0	_			0.133	18D	1.2 x 10 ⁻³	
FO-11	N/A				·					

				·	
_					
	•				
		· .	·		
<u>)</u>					
			·		

### 2.7. DATA SYSTEM REQUIREMENTS

Furnace Module-1 will require the use of the Furnace Data Acquisition and Control System (FDACS) consisting of a Furnace Control Unit (FCU) and a Furnace Actuator Unit (FAU), which will monitor and collect data from Furnace Module-1 and provide control stimulus as needed for the positioning of samples. The requirements from the Furnace Module-1 to the SSFF Core are defined in subsections 2.7.1 through 2.7.5 and in Tables 2.7-1 through 2.7-5..

### 2.7.1 SIGNAL INTERFACE DEFINITION

Table 2.7-1 defines the following data signals and control to perform the following data handling and operations functions:

- Furnace Module-1 activation and control
- Acquisition, formatting, and routing of Furnace Module-1 housekeeping data
- Acquisition, formatting, and routing of Furnace Module-1 science data

## 2.7.2 SIGNAL INTERFACE DEFINITION EXPANSION

Table 2.7-2 is an expansion of the input and output data streams identified in Table 2.7-1.

## 2.7.3 EVENT/EXCEPTION MONITORING REQUIREMENTS

Onboard event and exception monitoring requirements for data transmitted to the SSFF are defined in Table 2.7-3.

# 2.7.4 PAYLOAD OPERATIONS INTEGRATION CENTER DISPLAY REQUIREMENTS

The Payload Operations Integration Center (POIC) controls all payload operations and is equipped with consoles for data management, operations control, and mission planning. The data to provide this capability are shown in Table 2.7-4.

## 2.7.5 POIC LIMIT SENSING/EXCEPTION MONITORING REQUIREMENTS

Limit sensing and exception monitoring are provided to the POIC via downlink and are defined in Table 2.7-5.

-	1		NISE	DATA	13 3 1 3 1 E	10.18	R1//	'////	////		RESE	RVED		/////		! =
_		IMII EIN	EIN 0		×   V   -	AIA	A	1	-	-	1	-		!	1	_
-		IDIG FIT	FIT . INMINWISITIEICILIM TI	NWISI	TIEIC	7.7	_ T_	_	_	_	_	- - - -	_		-	_
ENT		- N	105	10100	YINIP		<u> </u>	_	_	_	_	_	_		_	_
INO.   DESC	CRIPTION	IUIA	IF I.GI.RI IPITIMICIL I	<u>~</u>	PITIM	ICI	_	_	_	_	_	-	_	_	-	_
		1111	IA IOS	JOSIODIFIEI JOIOIE	E1 10	OE	_	_	_	_	-	_	_	_	_	_
_		IKI I	IC IF	IF IFSIXI I INIF!	<u>-</u>	<u>=</u>	_	_	_	_	_	-	_	_	-	_
1106 FURNACE MODU	106 FURNACE MODULE HOUSEKEEPING DATA   SI   1  3 32   N        1   1	ATA   SI	11 31	321	-   N	  -	11	<u> </u>	<u> </u>	<b>-</b>		-	-	-	-	: -
1107 SSFF HOUSEKEEPING DATA	SEPING DATA	1 181 1	11 3	31321 INI 1 1 1 11	_ 	_	1	_	_	_	_	_	_	_	_	_
1850 FURNACE SCIENCE DATA	ENCE DATA	1 181 1	Ξ	321	_ _	_	1	_	_	_	_	-	_ _	_	_	_
851 FURNACE SCIE	ENCE DATA	1 181 1	11 31	321	_ _	<u>-</u>	Ξ	- '	_	_	-	_	_		-	_
1	2 3	! ! ! ! ! !	-	1	1 47		 	i 1	9	į		7			!	; &
123 45678901234	1567890123456789012345 6 789 012 34 56 7 8 9 0 1 234 567 890 123 4 567 890 1 23 4567 89 0	2345 6 789	012 34	26.7	6 8	7	234 56	57 89	0 12.	4	267	068	1 23	4567	8 9	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 1 of 38)

1 _ 1	1010	TISIMNINMI	ISIT!	1 1	DATA DESCRIPTION	N MONICI		1111111111111	1111	= 7
	2 E	190108	<u> </u>	START! END	IDATA	VALUE     L		CIRCISID	<u>=</u>	- =
2 02	9		<u></u>		-1	-	_	DI IOINO.	_ _	_ _
	IUIE		_	WDIBTIWDIBTIY	BTIYL		IT.	10	<u>a</u>	<u>B</u>
	<u></u>	- 18	- ix	<del>-</del> -	P	INICIO	131	<u>교</u>	_ =	
	- X	<u>-</u>	1 101	<u>-</u>	131	TIPLE	_	<u>-</u>	<u> </u>	<u></u>
120011061Go/NoGo Error Override	101 1	101	00181	00100100100100	1 1001		X	13330	0   4 1	7.
Elapse	l DC	101 106	_	101100	1 1901001	<del>-</del>	X	13331	11411	7
stem State	100	101 103	_	010010010010	1 1601	<u>-</u> -	X  	13332	21411	7
120311061Sample Number (Mode)	901	101 106	100101 19	11001011	1151	<u>-</u> -	X	_	3   41	7
lapse	l DG	_	_	6011010011	1 1601	<del>-</del> - -	X   -	_	_	2
205 106 Process Elapsed Time - Minutes	l DG	101   06	_	01011101011115	1151	- - -	_	133321	51411	7
e	INI	101	1810	2103100103107	1 1201	1 1 1 1	_	1 133361		7
208  106  IFEA Lower Humidity	I IAI	101	0181 1	5104100104107	1 1/01	1 1 1 1	_	13337	7   41	7
209 106 IFEA Upper Humidity	AI	101	1 1510	210210015107	1 1/01	1 X   X	_	13338	_	- 5
210 106 IFEA Upper Atmosphere Temp	IAI	101	5 1	5112100112107	1 1/01	I IXIX	_	_		7
E	I IAI	101	1	113100113107	1 17011	_	_	_	6   4 1	5
212 106 RFM Hot End Shell Temp	I AI	101	1 151141	1100114107	1 1 1 1 1 1	X   X	_	_	7   41	7
213 106 Ampoule Alignment Arm Temp	I IAI	101	1 1511	115100115107	1 1/01	X     -	_	_	8   41	5
	I AI	101	5	5 16 00 16 07	1 1/019		_	_	9   4	7
_	I IAI	101	1   5   1	511710017118	1 1701	_	_	_	0   41	7
216 106 IFEA Absolute Pressure 2	IAI	101	1 15118	3 00 1 18		X I X I	_	_	_	7
217 106 Furnace Linear Position	IAI	101	1 181191	00		X X	_	_	_	7
218 106 Indexing CAM Rotary Position	I HAI	101	-	201001201		X	_	_	_	7
219 106 Experiment Main Bus Current	I AI	101	1 1812				_	_	4141	2
	I IAI	101	1 181221	00	_	XIXI I	_	_	_	7
1221 106 Water Outlet Vlv RCCB Off Status	_	101	1 18123	00		- - -	<u>X</u>	_	0   41	7
1222;106;Water Outlet Vlv RCCB On Status	I IDI	101	1 18123	01		<u>-</u> -	<u> </u>	<del>-</del>		7
	I IDI	_	B 23	021		X	<u> </u>	_		5 -
224 106 IFEA Coolant Flow #2 Status	IOI	_	2	031		- X	<u>.</u>	_	_	7
225 106 Vacuum Vent Vlv RCCB Off Status	IOI	_	B 23	041		- -	<u>X</u> -	_		2
1226 106 Vacuum Vent Vlv RCCB On Status	I I DI	101	1 1812	3105123	11051 1	- - -	<u>-</u>	_	9   4 1	-
1227/106/Hot Boost Mod A RCCB Off Status	IDI	101	1 1812	3106123	_	<u>-</u> -	<u>,</u>	1 133701	0   41	151
1228 106 Hot Boost Mod A RCCB On Status	DI	101	1 1812	310712	31071 1	- - -	<u>.</u>	_		
12291106 Hot Boost Mod B RCCB Off Status	101	101	1 1812	3108123	1 18018	_ _ _	<u>۲</u>	_	7	_
[230]106]Hot Boost Mod B RCCB On Status	IDI	101	1 1812	310912	31091 1	- - -	<u>λ</u>	1 1337	3   4 ]	121
	-				-			-	<u> </u>	: -
	3.4	4	4	5	5 5	999	1.1	7	7	8
, , , , , , , , , , , , , , , , , , ,	0 6	S	7 8	1 3	5 7	5 6 7	1 2	2	80	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 2 of 38)

, ,	ciu	SIWNINWI	E	NOWI	///	111111111111111111111111111111111111111	! = '
z	ν <u>π</u>	501051	IOIY	LONEN VALUE 1			
DESCRIPTION	<u>₹</u> 5		FEET	3 3			
	UE		THI WO I BT I WD I BT		Ī	T1 D1 1P	<u>B</u>
=	<u>-</u>	- 5		INICIOI	<u>-</u>	E   1	<u> </u>
	<u>×</u>	<u>-</u>	131       1   101	TIPIF	_	<u> </u>	Ξ
	101	1011	B 23 10 23 10			13374141	121
232 106 COLD Main Prim Mod RCCB On Stat	101	101	1 (8)23(11)(23(11) (	_ _ _	I X	13375141	121
233 106 HotMain Prim Mod A RCCB Off Stat	IDI	101	I (B)23(12)23(12) +	_ _ _	X.	133761411	121
1234 106 HotMain Prim Mod A RCCB On Stat	IDI	101	_	- - -	×	13377141	121
Inlet Valve RCCB	IDI	101	[23]14[23]	_ _ _	ΙX	133781411	
r Inlet Va	IO	101	23 15 23	_ _ _	X		121
237 106 PDS Airflow 1 Status	DI	101	1241001241	- X-	<u> </u>	13380141	121
Airflow 1	IO	101	124   01   24	X	I X I	_	121
	IDI	101	1021241	X	X	_	_
240 106 PCS Airflow 2 Status	IDI	101		X	I X	13383 41	
241 106 Argon Fill Valve RCCB Off Status	IDI	101	1241041241	<del>-</del> - -	X	13384141	151
242 106 Argon Fill Valve RCCB On Status	IOI	101		<del>-</del> - -	I X	13385 41	121
(243)106/PCS Utility RCCB Off Status	[D]	101		<del>-</del> -	X	13386141	121
1244 106 PCS Utility RCCB On Status	Idl	101	IBI24 07 24 07	_ _ _ _	١X١	13387141	121
245 106 Peltier Conn Motor RCCB Off Stat	101	101		<del>-</del> - -	<u>, x</u>	13388141	15
Conn Motor	IDI	101	12410912	_ _ _ _	I X	13389141	121
247 106 Cold Main Red Mod RCCB Off Stat	IOI	101	5	_ _ _	X	13390141	121
1248  106  Cold Main Red Mod RCCB On Status	IO	101	24 11 24	_ _ _	I X	13391141	5
124911061Hot Main Prim Mod B RCCB Off Stal	101	101	1241121241	_ _ _	-X	13392141	121
Main Prim Mod B RCCB C	101	1011	124 13 24	_ _ _	Ξ	13393 41	121
Guard Module RCCB	IOI	101	124 14 24	- - -	<u>X</u>	_	_
Suard Module RCCB On 3	D1	101	1241151241	_ _ _	×	13395141	_
106 Mech Pulsing Mod RCCB	IQ!	011	12510012	- - -	X	_	121
254 106 Mech Pulsing Mod RCCB On Status	IO!	101	1251011251	_ _ _	X.	2531	5
106 IFEA ABS Press 2 RCCB Off	1D1	101	1251021251	_ _ _ _	Σ	_	
ABS Press 2 RCCB On S	101	101	1251031251	_ _ _	<u> </u>	13397 41	121
106 IFEA ABS Press 1 RCCB	101	101	12510412	_ _ _	<u> </u>	_	
~	101	101	25	 - -	<u> </u>	_	_
106 Vacuum Vent	101	101	51061251	_ _ _	<u> </u>	_	
260 106 Vacuum Vent Valve Open Status	IQI	101		_ _ _	-X	134011411	121
	- -				- -	-	¦ –
	۰ م	4	4 4 5 5 5 5	9	11	1 1	00
		۔ ۔	7 8 6 6 7	5 6 7	- 2	. 00	
		,	. , ,	,		)	١

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 3 of 38)

	1		1	_+	1 1 1 1 1 1 1 1 1 1 1	1	111111111111111111111111111111111111111	1111111	-
	E 510	MNINM	SITI	DATA DESCRIPTION		 			
		Y 10180103	I X I O			_		-	
ENTICNI	2 4 4	19/105	IPISTARTI	ART! END IDATA VALUE!		- · - ·	CIRCISID	 - <u>-</u>	
		3	IPIE I	T	- E	_			- a
B DESCRIPTION	2 5		GM	WDIBTIWDIBTIXI	INIXIC	_	11 01		- -
	- 1 - 1	؛ د		1d1 - 1	INICIO	_	: :	_	_ ;
× -		<u>s</u> :	• - • -	<u> </u>	ITIPIF		- -	- Q-	ا <u>سا</u>
	- i				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 .	701	1 1 4 1 6 0 4 6	
, , , , , , , , , , , , , , , , , , , ,	-	-	201a1 1	51081251081 1	- - -	_	_	1161701	<b>.</b> .
The Closed Status	-	- 10	20101	0150100	_ _ _	_	XI 134	34031411	7
211 112	- I <u>a</u> -	01		5	-	_	XI 133	32541411	7
II valve open	I IDI	011	1 18125	_			_	32554411	7
Red Mod A Rock of the	_	011	1 18125					34041411	2.1
Red Mod A RCCB ON		-	_	251121251121 1	- x -	_			
tlet Valve Normal		- 10			X	_	_	3405141	7 0
Ourlet	_	011		25112125	X	_	_	3406 411	
lor Valve N	_	011			- X	_	1XI 13	3407141	121
Inter Valve Bynass	101 -	011	_	151	-	_	1X1 13	3408 41	
r Intel Valve Direct	I IDI I	01		26/00/26/00/			171 13	3409141	121
Safe Brake Noce of	IOI	011	1 1812				. <del>-</del>	3410141	121
Safe Brake KULB	101	01	1 1812	261021261021				141114	_
Hold Down		10	1 1B12	261031261031 1	_	<u> </u>		2412141	
Hold Down Reti		-	IB 2	261041261041 1		 		3413141	-
Hold Down	2 2			61051261051 1	-	_		1610160	
Hold Dowr	101	5 6	-	19019	-	_		3414141	
HD Motor RCCB Off	ומו ומו	3		17019	-	_	- ·	1 1 1 7 1 1 1 1	
HD Motor RCCB On Statu	101	100		081	<del>-</del>	_		3416 411	
Motor Clutch RCCB Off	_	101		196100	_	_ _	_	341/141	
Motor Clutch RCCB On		10			_	_	_		7.0
Motor	101 -	1101		5 =	<del></del>	_	_		7
Drive RCCB On S	101	101			_	<u>-</u>	_		
larion Clu	_	101		7 ~	_	<u>-</u>	_	3421141	171
Billublikapid Alation Clutch RCCB On St	- -	101			_	_		3422141	1   2
Alacton Cre-	Idi	101	<u>=</u>	61141201	-	_	_	34231411	
XIACION MET NOCE OF	Id) is	101	<u>B</u>			 	_	342414	41121
106 Rapid Xlation McI Need on	IOI	101	- B			- 	_	342514	41121
ce Position	Idi	101	- B	271011271011		 - ;	· -	342614	41121
106 Furnace Position Home	101		18	271021271021 1	x -	_ :			-
treme Trvl	101		<u>-</u>	271031271031 1	_	-   <u>X</u>	 - :		
Trvl Exceeded	_	3		271041	-	<u> </u>	- X		
8911061Ampoule Alignment	<u> </u>			271051271	_	<u> </u>	X	342914	17116
29011061Ampoule Alignment Retracted	101	- 10	- 1	. !	1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1	-	   - 
1		-	-	- - -	_	_	— ; — ;	- r	- a
	- • - •	- <		5 5 5 5	9 9	9	, ,		•
	4	<b>.</b>	• •	7 5 7	9 5	_	1 2	n n	>
י כ כ	0 6	~	2 ' 0	,					
- 9									

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 4 of 38)

ENT C NI		IC IU	MNINMI	: == ==	MONIC!	///	111111111111111111111111111111111111111	
	DESCRIPTION	<u>¥</u> 0	9/1.9	P START  END		IC IR	CIRCISID IE ITI	
<u>~</u> -		OIE	: <b>=</b> : <b>-</b> :	-	VXX	ĭ	DIIOINO. JX IAI	
		<u> </u>	<u>-</u> -	S  X   #    #    P  /  D           E	INICIOI		= = :	
291 106 Ampoule	1	IQI I	101	1 181271061271061 1	a Ì	-   :		
1292 106 Ampoule	Extended	Idi	101	12/10/12/	<del>-</del> -	<u> </u>	-	
129311061Ampoule		I I I	101	271081271	 	<u>.</u>	13431 41 2	
129511061Ampoule	Align Mtr RCCB On Stat	IOI	101	271091271	  	= =	13432141121	
129611061Ampoule	Support Retracted	IO	101	27/110/27/	- - - -	X		
129711061Ampoule		101		127	_ _ _	l X l	41	
	Secu	101	10			I X	13436141121	
	Plt Mtr	IQI	101	1271141	  	<u>~</u> :	41	
13001106/Ampoule	RCCE	I IDI	101	127 115 127 1	 	<u>-</u> -	41.	
13021106/Cold Guard Mod RCCB		IQI	101	1281001	  	= =	411	
130311061Caroment Section 130311061Caroment	ទី ទ	101	101	-	  	= =	116100	
[304]106[Carouse]	Spacer Plt Gap Lim-Not	10	101	_	 	<u> </u>		
13051106 Indexing	Cam Not Stowed		5	1281031281	- - -	X	41	
130611061Indexing	Cam Stow		101	1281041281	_ _ _	-X	12   41	
1307 106 Carouse1	Trk			B 6	_ _ _	ΙX	43 41	
1308 106 Carousel	Extr Left	I	101			X	441411	
1309 106 Carousel		IOI	101	1281081281	  	<u>.</u>	41	
	Trk Extr	IOI	101	281091281	 	Ξ:	43	
13111106/Hot Main	Red Mod B RCCB	101	101	28/10/28/	 	<u> </u>	7	
13131106155W Taday	Ked Mod B RCCB C	IDI	101	28	 	= =	3258141121	
	Motor BCCB	IOI	101	1281121	- - -	X	7 7	
Inde	ting Joa	101	101	1281131	_ _ _	<u> </u>	41	
13161106 SEM Indexing	ing Jog CW S		101	128   14	- - -	- X	3450[41[2]	
1317/106/Ampoule N	ot Processing			1 181281131 1	- - -	_ 	1411	
1318 106 Ampoule F	rocessing				- - -	_ 	1411	
131911061System Bu	s Relay	IOI	101		_ :	Z.	453 41	
320  06  System Bu	is Relay On Status	IDI	10	21201621			141	
				621601631		I.X.	3455141121	
- c		_	_ _					
_		3 4	4	44 5555	9 9	٠ ر	- r	
		0 6	3 5	78 1357 5		٠,		

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 5 of 38)

ı	1010	I T I S I MN	DATA	A DESCRIPTION	!	///////////////////////////////////////	/////	1///
	ν <u>«</u> Σ		I II	FNO LOATA	A VALUE I 11.1	ICIBCISTD	SID IE	E
INO.10 01	9	3	FEE		-	IDI IOI NO.	_	
	3101	- I	WDIBT	WDIBTIWDIBTIY		ITI DI	_	181
	=	x  s		I   P	INICIO	13   E	11	<u>-</u>
	X =		_	<u>=</u>	TIPLE	- - -	=	<u>교</u>
132111061Peltier Pulsing Dry RCB Off St	IQ!	1011	B129104129104	291041 1			326014	41121
106 Peltier Pulsing Drv RCCB On S	101	_	29   05	291051 1	<del>-</del>	- - - -		41121
	_	1021 1 1	_	- - -	<del>-</del>	- - -	<u>-</u>	41121
002 850 Frame Count (SFID)	<u>-</u>	1021 1 1	_	<del>-</del> -	- - -	<u> </u>	<u>-</u>	-
850 Spacela	_	1021 1 1	_	- -		_ ·	<u> </u>	_
z	<u>-</u>	1021 1 1	_	_ ·		 		
850 Mission	<u>-</u>	1021 1 1	_	_	_ ·	- · - ·	<u> </u>	
850 Furnace Position	<u>-</u>	1021	_	_ ·	·	_	<u> </u>	
850 Furnace Position Home	_	1021	_	_ ·	- ·	 		41121
850 Furn Extreme Trvl	_	1021	_		- ·	 	<u> </u>	
850 Furn Extreme Trvl E	_	1021		_ ·		 	<u>-</u> -	
850 Core Hold Down	<u>-</u>	1021	_		_ ·	- ·		
850 Core Hold Down Retr	<del>-</del>	1021	_	_ ·	_ ·	<u> </u>		
850 Core Hold Down	_	1021 1 1	_	- -		<u>-</u> .	<u>-</u> .	_;
Hold Down Extended	_	1021 1 1	_	<u>-</u> -				
Outlet Valve Normal	<u>-</u>	1021 1 1	_	- -	<u>-</u> - -	_	_	_
1015 850 Water Outlet Valve Bypass Stat	<u> </u>	1021 1 1	_	_ _ _	- - -	_ ·	<b>-</b>	
Valve Normal	<u> </u>	1021 1 1	_	<u>-</u>		- - -		_
1017 850 Water Inlet Valve Bypass Status	<u>-</u>	1021 1 1	_	- - -	_ _ _ _	- -	_	
Vent Valve Open St	- -	1021	_	- -	_ ·	<u> </u>		_
n Vent	_	1021 1 1	_	- -	_	_		_
Fill Valve Open St	<u>-</u>	1021	_	<u>-</u> -	_ ·	- · - ·		
-	<u>-</u>	1021 1 1	_	<u>-</u>	_			
850 Amboule	<u>-</u>	1021 1 1	_	_	_			
10231850 Ampoule Support Retracted	<del>-</del>	1021 1 1	_	- -	_ _ _	- -	_	
1024 850 Ampoule Alignment Not Retracted	<u>-</u>	1021 1 1	_	- -	_ _ _	- -	_	
1025 850 Ampoule Alignment Retracted	<u>-</u>	1021 1 1	_	<del>-</del> -	<del>-</del> - -	<u>-</u> -	_	
1026 850 Ampoule Alignment Not Extended	<u>-</u>	1021 1 1	_	<del>-</del> -	_ _ _	<u>-</u> -	_	_
027 850 Ampoule Alignment Extended	<u>-</u>	1021 1 1	_	- - -	- - -	_	_	_
028 850 SEM Indexing Jog CCW Status	_	1021 1 1	-	- - -	_ _ _ _	- - 	-	41121
	-		<u> </u>	-		- -	     	-
	. ~	4 4	٠ ي٠	5 5 5	9 9 9	1.1	1 1	00
	· c		, -	2 2 2	2 6 7	2	5	0
	J O	, ,	-	י	>	1		)

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 6 of 38)

	1010	MNINMIS		ATA DE	DATA DESCRIPTION	I WON I C	////	(//////////////////////////////////////	
IN CIENCE	S	15010S101Y		1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	REO   A			
	N I O	16.1/61	PISTART	TI END	IDATA	VALUE!! []	ICIRC	CIRCISID	IE IT
IR . I DESCRIPTION	9	I W F	E!		- ITI	E   E   .	10110	DIIOINO.	X  A
	IUIE	11 01 1	_	WD   BT   WD   BT   Y	TIYI	IVIXICI		Ια	1P 1B1
_ : _ :	<u>  [  </u>	1X1 S1 1	- =	<u>-</u>	I B I	INICIO	S   E	<u> </u>	I   I
_ _ _	<u> </u>	101 /1 I	_	_	<u> </u>	ITIPIFI	<u>-</u>	_	1D 1E1
	- - -	1021	- -	_ _	  -  -	_ _ _ _	<b>-</b>	_	141121
Not Processi	_	1021	<u> </u>	_	<u>-</u>	<u>-</u> -	<u>-</u>	_	141121
10311850 Ampoule Processing	_	1021	_	- -	<u>-</u>	- - -	<u>-</u>	_	141121
1032 850 Indexing Cam Not Stowed	_	1021	_	- -	<u>-</u>	- - -	_	_	141121
1033(850)Indexing Cam Stowed	_	1021	_	<del>-</del>	<u>-</u>	- - -	<u>-</u>	_	_
1034 850 Peltier Connector Not Retracted	_	1021	<u>-</u>	_	<u>-</u>	_ _ _	<u>-</u>	_	141121
035 850 Peltier Connector Retracted	_	1021	<del>-</del>	-	_	_ _ _ _	- -	_	_
Connector	_	1021	- -	- -	<u>-</u>	_ _ _ _	<u> </u>	_	_
850 Peltier Connector Ex	_	1021	- -	<u>-</u>	<u>-</u>	- - -	<u> </u>	_	_
038 850  Ampoule 4 Failure 2 Status	_	1021	- -	<del>-</del>	<u>-</u>	_ _ _	- -		_
103918501Ampoule 4 Failure 1 Status	_	1021	_ _	<u> </u>	<u>-</u>	- - -	<u>-</u>		_
104018501Ampoule 3 Failure 2 Status	<u>-</u>	1021	_ _	<u>-</u>	<u>-</u>	_ _ _	<u>-</u>	_	_
041 850 Ampoule 3 Fallure 1 Status	<u>-</u>	1021	_ _	_	_	- - -	<u>-</u> -	_	-
1042 850 Ampoule 2 Failure 2 Status	_	1021	- -	<u>-</u>	_ _	_ _ _	<u>-</u> -	_	-
1043 850 Ampoule 2 Failure 1 Status	_	1021	- -	<del>-</del>	<u>-</u>	- -	<u> </u>	_	_
1044 850 Ampoule 1 Failure 2 Status	_	1021	- -	<u>-</u> -	<u>-</u>	_ _ _	_	_	_
1 Fail	_	1021	- -	- -	<u>-</u>	<u>-</u> -	<del>-</del>	_	_
850 PDS Airflow 1	_	1021	- -	- -	<u>-</u>	_ _ _	<u>-</u>	_	_
850 PCS Airflow 1 Status	_	10,21	_	<u>-</u>	<u>-</u>	<u>-</u>	_	_	_
Press 2 RCCB Off	_	1021 1	- -	<del>-</del>	<u>-</u>	<u>-</u> -	<u>-</u> -	_	_
10491850 IFEA ABS Press 2 RCCB On Status	_	1021	- -	<del>-</del>	<u>-</u>	<u>-</u> -	<u>-</u> -	_	_
850 Spare RCCB Off	<u>-</u>	1021	- -	<del>-</del>	_	_ _ _	<u>-</u> -		_
850 Spare RCCB On Stat	- -	1021	- -	<del>-</del>	 -	_ _ _	- - -	_	_
850 IFEA Coolant F	_	1021	- -	<del>-</del>	- -	_ _ _	- -	_	_
O	<u>-</u>	1021	- -	-	<u>-</u>	_ _ _	- -	_	_
10541850 Cartridge 2 Failure 2 Status	_	1021	- -	<u> </u>	_	_ _ _	<u>-</u> -	_	
105518501Cartridge 2 Failure 1 Status	_ _	1021	- -	- -	- -	_ _ _	<u>-</u> -	_	141121
10561850 Cartridge 1 Failure 2 Status	_	1021	- -	- -	<u>-</u>	_ _ _	_ _ _	_	
1057 850 Cartridge 1 Failure 1 Status	_ _	1021	- -	<del>-</del>	- -	<u>-</u> -	<u> </u>	_	141121
1058   850   Ampoule 6 Failure 2 Status	_	1021	- -	<del>-</del>	<u>-</u>	_ _ _	- -	_	141121
1	  -  -	- - -	_		_	  -  -  -	_ _	_	_
0 0 0	3 4	4 4 4	•	5 5 5	5	999	11	Ĺ	8 /
3 67	0 6	3 5 7	8	9		2 6 7	1 2	5	0 8

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 7 of 38)

, )	M	MNINMISIT	181	<del>-</del>	DATA		SCRI	DESCRIPTION	Σ.	MONIC	_	::	ninnnnnn	<u>:</u>	<u> </u>
	-	SOLOSIOLY	0	<u> </u>	1	1	1	1 1 1 1 1	- I RE	REOIA	_	i		ļ	<u> </u>
	-	9/1 9	=	IP ISTART!	ART	END		IDATA VALUE!!L	I 3	7-	_	2 E	CIRCISID	<u>–</u>	= :
10		3	. =	1	1	T	- II		3	<u>ਜ</u>	_	i	DI IOINO.		<u> </u>
IR.:   DESCRIPTION	2 6	: =	=	3	WOLBTIWDIBTIX	MD 1 B	TIX		2	VIXIC	_	_	=	<u>-</u>	<u>-8</u>
_ N N	4 -	2 0	ž	*	_	-	<u>a</u>		Z	NICIO	_	~	급	=	<u></u>
	 - :::	2 =	=	<u> </u>	· –	. —	<u></u>		11	TIPIF	_	-	- !	<u>a</u> :	<u>=                                    </u>
		1	-	1	1 .	1		1	-	! ! -	-	<b>-</b>	_	141	121
ocolocolamonile & Fallure   Status	<u> </u>	021	<u> </u>	_	_	-	_							141	- 2
c oration o	_	021	_	_	_ _	_	_		_	_	_	<u> </u>			4 5
850 Ampoule 5 Fallute 2	. =	021	_	_	_	-	_		_	_	_	_	_	141	_
850 Ampoule 5 Fal		021		. –		_	_		_	<u>-</u>	_	_	_	41	-
850 Water Outlet VIV RCCB UIL		1 20					_	_	_	_	_	<u> </u>	_	41	_
2		021		-		_	_		_	_		_	_	141	_
850 Vacuum Vent VIV RCCB OIL	. <del>-</del>	120	-		_	_	_	_	-	_	_	_	_	141	_
ent VIV KCCB ON Status		100	-		_	_	-	_	-	<u> </u>	_	<u> </u>	_	141	_
x Motor RCCB Off		1 20			_	_	-	. —	-	_	_	<u> </u>	_	41	_
ex Motor RCCB On	 				. –	-	_		-	_	_	_	_	4]	_
HD Motor RCCB Off	 	7 6				· -	-		-	_	_	_	_	141	_
CB On Sta	- ·	7 6				- <del>-</del>	-		_	_	_	<u>-</u>	-	141	_
Boost Mod A RCCB Off	_	170							-	· –	_	_	_	141	121
Boost Mod A RCCB On S	_	70								· –		_	_	141	121
Boost Mod B RCCB Off		170							-	· –	. —	_	_	141	121
Boost Mod B RCCB On Stat		70								· –	_	_	_	141	1121
d Main Prim Mod RCCB Off	_	770								- 	. <b>–</b>	_	_	141	1121
n Prim Mod RCCB On S	_	170				 			-	· –	. –	_	_	141	1121
Prim Mod A RCCB Off	_	120								- -	-	· –	_	141	1121
Prim Mod	_	0.7				 					-	_	_	4	41   2
l Trk Extr Right	_	021		<b>-</b> -						. <u>-</u>	-	_	_	141	1121
1 Trk Extr Ri	_	70		<u>-</u> -						· -	_	_	-	14	41121
080 850 Ampoule Support Not Secure	_	70		<b>-</b> -					-	_	_	_	_	141	1121
	_	170							-	_	_	_	_	141	1121
	_	021		<u>-</u> -					-	_	_	_	_	141	1   2
l Trk Extr Left L		170		<u> </u>							. –	_	_	-	41121
l Spacer Plt Gap		105		<u> </u>								_	_	-	41121
_	<u>-</u>	1051	_	_								. –	-	- 1	41121
S	_	1021	-	_	_		<u>-</u> -	<b></b> -					-	- 4	=
Sot	_	1051		<u> </u>	-	_									_
8501Ampoule Alig	_	1021	_	<u> </u>	_	_	_	!	- !	- ! - !	- !	-	-	- 1	-
			-	: -	  -	-	_		-	_		_	_	_	_
	- <	- 4	. 4	- 4	٠,٠	S	s	5	9	9 9		7	7	-	<b>x</b>
0 0 0	r <	<b>r</b> ~		• a	, -	-	s		Ş	1 9		1 2	S	ထ	0
1 7 1	၁ ဇ	7)	- ۵	o	-	,	)		,						

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 8 of 38)

	lc lu	N N N	MNINMISIT	DATA	DESCRIPTION	PTION   MONIC!			
	<u>Σ</u>	101001051	SIOIYI-		1	IREQ!A!			
	Y G	2 :	<u>.</u>	RTI	END IDA	IDATA VALUEI ILI	IC I	CIRCISID	IE IT
	9 :	<u>3</u> :	<u>교</u>	1		E E .	•	OI NO.	_
	<u>=</u>	<u> </u>		D BT W	WD BT WD BT Y	INIXICI		IT! D!	1P 1B1
	<u> </u>		<u>*</u> .	<del>-</del>	<u>-</u>	INICIO	131	<u> </u> 3	I   I   I
	- L		0-	-	- E	TIPIF	_	_	ID IE!
10891850 Ampoule Align Mtr RCCB On Stat	_	1021	-	-	-			-	1 0
10901850 Water Inlet Valve RCCB Off Stat	- -	100	 				_ :		-
RCCB On S		1001	 		 	_ ·	_	_	141121
/alve RCCB Off		200	 	 	 		_	_	_
Fill Valve RCCB On S	 	1001	  	 	<u>-</u> -	_ ·	<u> </u>	_	_
850 System Bus Relay Off Stat		102	 		 	_ ·	_ ·	_	_
Bus Relay	- - -	1021	 		 	_ ·	_	_	141121
olant Flow #2		100	 	 	 	_	<u> </u>	_	_
850 PCS Airflow 2 Status	 	1021	 		 	  	<u> </u>	_	_
109818501Cartridge 6 Failure 2 Status		100	 		 	- ·	<u> </u>	_	_
e 6 Failure 1		1021	 	 	 	- ·	<u> </u>		141121
e 5 Failure 2		1021	 	 	 	_	_	_	141121
e 5 Failure 1	 	1021	 	 	 		<u> </u>		141121
e 4 Failure 2		100	 	 	 		_	_	41 2
e 4 Fallure 1		1021	 	 	 		_	<b>-</b> .	141121
e 3 Failure 2	· -	1001	 		 	- ·		_	_
8501Cartridge 3 Failure 1		102	 		 		- ·		141121
110618501PCS Utility RCCB Off Status	- -	1021	 		 		<u> </u>		_
ity RCCB On S	-	1021	 	 	 	 	 		
1108/850/Step Motor Drive RCCB Off Stat	_	1021	 		 	 	<u>-</u> -	<b>-</b> .	-
Motor Drive RCCB On	_	1021	- - -	 	 	  	 		
ABS		1021	- - -		 		 		
(1111/850) IFEA ABS Press 1 RCCB On Status	_	1021		· –	 		 		
Conn Motor		1051	-	_	- - -		 		7117
Peltier Conn Motor RCCB On	_	1021	- -	·	- - - -		<del>-</del> -		141121
850 Step Motor Clutch	_	1021	_	_	-	 	 		141121
Step Motor Clu	<del>-</del>	1021	- -	_	 		 		41121
PSOIRapid Xlation	_	1021	_	- -	- <del>-</del>	 			4112
850 Rapid Xlation	_	1021	_	- -	- - -	  	 		_;
1118/850/Rapid Xlation Mtr RCCB Off Stat	_	1021	- - -		 	  	 		41121
	-		-   -	-   -	-   -   -   -   -   -   -   -   -   -				17 14
0	- <	- <	- •		- , - ,	_ _ _	<u> </u>	- -	-
3 67	7 (	- r	<b>a</b> . 1	n	v v	999	7 1	7 7	æ
>	5	3	8 /		5 7	5 6 7	1 2	٥	C

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 9 of 38)

	) I	01:	SIMNINMI	MISIT	! _	DATA	DESC	DESCRIPTION	MONICI	///	HIIIIIIIIIII	11111	. – -
	Σ:	SE	01081	<u> </u>	X	,	ONG	THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S	-   KEQ1A1		CIRCISID	IE IT	
10 0		<u>4</u> .	9/3 	9	FIFT	,	7 I	111		<u> </u>	DI IOI NO.	×	. <u>-</u>
I IR . I DESCRIPTION		2 4	= =		2	WDIBLIWDIBTIX	BT	X	IVIXICI	H	١a		_
·	-				=	-		- <del>-</del> -	INICIOI	13	<u>a</u>	_	_
 	. <del></del>	2 <u>x</u>			. – : –	_	_	<u> </u>	TIPIF	<del>-</del>	_	ID IE	<del>-</del> !
		-	1001	-		-	<u> </u>			  -	_	14112	_
d Xlation Mtr	5		700					. <u>-</u>	-	_	_	14112	
			1001	 	<del>-</del> -				 			14112	_
1121 850 Fail Safe Brake RCCB	On Sta	_	1021	<u> </u>	- · - ·				  				_
1122/850/Cold Main Red Mod RC	RCCB Off Stat	_	1021	_					 			-	-
850 Cold Main Red Mod	RCCB On Status!	_	1021	_ ·				 	  				7 -
Main Prim Mod	B RCCB Off Stal		1071	- ·					 	 	-	_	7 1
Main Prim Mod	CCB C		701	 	<u> </u>				 	-	. –	14112	7
Guard Module	off	_	1071	- · - ·					 	-		14112	7
d Module	on		1021							 		_	5
11281850 Mech Pulsing Mod RCCB		_	107	<u> </u>	_						-	-	_
sing Mod RC	St	_	1021	_	_				 				
Red Mod A	RCCB Off Stat	_	105	_	_							-	-
Red Mod A	RCCB On Stat	_	1021	_	_			 					-
d Gua	Off Status	_	1021	<u> </u>	_			 					
Guard Mod RC	On Stati	_	1021	_								-	-
Main Red Mod B	RCCB Off Stat!	_	1021	<u> </u>					 				5 -
Red Mod B	S u	_	02	_	_								
		_	1021	_					 				2
1137/850 Peltier Pulsing Drv	RCCB On Stat!	_	1021	_								141	12
138 850 Sample to Process #	_	_	1021	- · - ·		<b>-</b> -		<b>-</b> -	 	 		141	2
to	2		1001	<u> </u>					 	 			7
to			1001						 	. <u>-</u>	_	14112	7
to	<b>4</b>		1701					<b>-</b> -	- - -	· –	_	14112	2
to		_	1701		<u>-</u> -				 	· -		141	2
			1701	- · - ·					 		. <u>-</u>		7
144 850 Processed Sample #1	_	-	1701		<b>-</b> -	<u>-</u> -			- - 		. <u>-</u>	141	2
145 850 Processed Sample #2	_	_	1021	<u> </u>		 			 			14112	21
146 850 Processed Sample #3	_	_	102	_					 	 	- 	141	-
114718501Processed Sample #4	_	_	1021	_					<u>-</u> -			7 7	2 -
	-	_	1021	<u>-</u>	_	- -	- !			- +	- 1111		- !
! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	-	-		-	_	_	- - -	_	-	_	_
- « - «		۔ م	4	4	4	S	. 5	5	999	7 7	7	_	ဆ
) (		0	3	5 7	80	_	3		2 6 7	1 2	2	ဆ	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 10 of 38)

		n c in	SIMNINMI	MISITI	DATA		DESCRIPTION		///	<i>HILLIANIA</i>	11111
I ENT C N		χ . Σ	18010	<u> </u>		1 1	1 1 1 1 1 1	REG	<u> </u>		
5 -		<b>Y</b> 10 .	9.	<u> </u>	START	CNG	IDATA VALUE		IC I R	CIRCISID	E IT
	DESCRIPTION	<u>9</u> !	<u>3</u> :	<u> </u>			<u>_</u>	EIEI	)I   O	ONIC	X A
 <u>×</u> -		3 . 10 :	<u> </u>		MD BT W	BT   WD   BT   Y	<del>,</del>		II	ITI DI	_
		<u> </u>			<del>-</del>	_	- L				T     T
· · · · · · · · · · · · · · · · · · ·	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- K-	<u> </u>	- lai	-	- !	<u>_</u>	TIPIFI	<u>-</u>	_	ID IEI
850 Processed	Sample #6	<u>-</u>	1021	-	- -	-	-		-	-	41121
850 Last Sampl	e Index	_	1021	_	_	_	-	· -	- - -		; =
11511850 GMT Day		_	1021	- -	-	-		 			
850 GMT MIIII	seconds of Day	- - -	1021	 				 			41121
153   850   GMT Fractional	al Milliseconds	_	1021	- - -				  	 		
850 Last Comm	ž	<u> </u>	1021	- - -	· –	- - –		 			<del>-</del> -
850 Last	Received Word #1	_	1021	_ _ _	_	_	_	- - -	- -		=
850 Last	Word #	<u>-</u>	1021	<u>-</u> -	_	_	_	_ _ _	_	_	=
850 Last Com	Received Word #	<u>-</u>	1021	_ _ _	- -	_	_	- - -	_	_	41121
850 Last Com	Received Word	<del>-</del>	1021	_ _ _	- -	<del>-</del>	_	<del>-</del> - -	<u>-</u>	_	41   2
850   Last	Received Word	<u>-</u> -	1021	<u>-</u>	- -	_	-	<u>-</u> -	<u>-</u>	_	41121
850 Last	Word	_	1021	- -	_	_	_	- - -	<u>-</u>	_	41121
850 Last	Word	<u> </u>	105	- - -	<u>-</u>	_	_	_ - -	<u>-</u>	_	41121
BOUILAST COM	Received Word	<u>-</u>	1021	- - -	- -	_	_	- - -	_	_	41121
6318501Last	Received Word	<u>-</u>	1021	- - -	- -	<u> </u>	_	- - -	_	_	41121
E 0	Received Word	_ : _ :	105	_	<del>-</del>	<del>-</del>	_	- - -	<del>-</del>	_	41121
850 Last	Received Word	_	105	_ _ _	<u> </u>	<u>-</u>	_	- - -	<u>-</u>	_	4112
OSO   Last Com	Mord		105	·	_	<u> </u>	_	<del>-</del> - -	<u>-</u>	_	41121
650 Last	Word	<u> </u>	105	_ _ _	_	_	_	<u>-</u> -	<u>-</u>	_	41121
1169 850 1 5 5 COMMAND	Word	<u> </u>	1021	_ : _ :	<u> </u>	<del>-</del>	_	- - -	<u>-</u>	_	41121
1950 1 2 st Com	DIOM	<u> </u>	107	 	- ·	_	_	- - -	_	_	41121
	Baccined Word #16		107	- : - :	- · - ·	_ ·	_	_ ·	<u> </u>	_	Ξ
850 Last Comm	D TOM	 	70	 	- · - ·	- · - ·		<del>-</del> ·	_	_	=
1850 Last Comm	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	 	1701	- · - ·	- ·			_	_	_	Ξ
PEO 1 - At Com	DIOM	<u> </u>	1701	_ :	_	_	_	- - -	<u>-</u>	_	41121
OSO LASE COM	Mord	- : - :	1071	_ _ _	<u> </u>	<u>-</u>	_	_ _ _	<u>-</u>	_	41121
GOOFLAST COMM	Word	_	1021	- - -	<u>-</u>	_	_	<del>-</del> -	_	_	41121
850 Last Comm	Word	<u>-</u>	1021	<u>-</u>	<u> </u>	<del>-</del>	_	- - -	<u>-</u>	_	41121
//BSO/Last Comm	Word #2	<u>-</u>	1021	_ _ _	<u> </u>	<del>-</del>	_	- - -	<u>-</u>	_	41121
/8 850 Last Command	Received Word #24	_	1051	- -	- -	- -	_	<u>-</u> -	<del>-</del>	_	41121
	 	<u> </u>	-	-		-			-	-	1 -
0 0 0		3.4	4	4	5	5	. 9	9	٠,	, ,	- cc
		0 6	3 5	7 8	1 3	S	7	6 7	. 2	. 69	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 11 of 38)

	1010	TISIMNINMI	ISITI	DATA	DESCRIPTION	NOI	MONICI	mmmmini.	11111	-
ENTIC N	S W		≗.	1	•	1	I REOLA!	OLS TO TO	9 0	- E
<del>-</del> 0	V O	5/1.5	P STAKT	- 1	END   DAIA			ID I TO I NO		
L L DESCRIPTION	2 E	= =		_	BTIY			T   D	_	181
<u>×</u> -	2 =	2 -		=	<u>a.</u>		INICIO	131 EI	Ξ	<u></u>
 	<u>×</u>	2 -		- -	<u>=</u>		TIPLE	- -	<u>a</u>	181
13201-4: Oli ser Command Received Word #25		1021		-		 	 	  -  -	141	121
S. Olitast Command Necetives Hord #	- 	102	·		- - -		- -	_	4	121
650  Last Command Received Word	 	100	- - 	· -	. <del>-</del>		- - -	_ _	4	121
Command Necelved Word		100	 		. <u>-</u> -		- - -	_ _	141	121
830   Last Command Received Word #		1021	· –	. <u> </u>	- - -		- - -	_ _ _	141	_
1930 Last Command Received Word	- -	1021	. <u>-</u>	_	_		<u>-</u> -	<u>-</u> -	41	151
518501Last Command Received Word	. <u>-</u>	1051		_	- - -		- - -	- - -	141	_
1850 Invalid Comma	_	1021	<u>-</u>	_	<u>-</u> -		<del>-</del> - -	- - -	-41	1121
1850 User Red	_	1051	_ _	- -	- - -		- - -		4	41121
1850 ECS	_	1051	- - -	<u>-</u>	<u>-</u> -		- - -	_ _ _	4	41121
BSOIFTS	_	1021	_ _ _	- -	- - -		- - -		4	_
_	- -	1021	<u>-</u> -	<u> </u>	- - -		<u>-</u> - -	_	141	_
850 FHS Cold Zone Next T	_	1021	- - -	- -	<del>-</del> -		_ ·	_ ·	141	
	_	1021	_ _	_	- - -		- - -	_ ·	- 41	_
1850 FHS	_	1021	_ _ _	- -	<u>-</u> -		- - -	- -	- 4	_
1194/850/FHS Hot Guard Next Timeline Rec	<u> </u>	1051	- - -	- -	<u>-</u> -		_ ·	_ ·	141	
850 SIDS Next Timeline Record	_	1021	<u>-</u>	_ _	_ _ _		<u>-</u> :	<u> </u>	141	
Current Segment Start	<u>-</u>	1051	_	- -	 		 	 	4 -	171
Current Segment Stop 1	_	1051	<u> </u>	- -	 		- · - ·	 	T <	
Current Segment	<u>-</u>	1051	- -	_	 		<del>-</del> -	 	7 7	1771
Current Segment Stop Time	_	1021	- ·	<u> </u>			 	 		
FHS Cold Guard Cur Seg		1021	_ ·	- ·	- : - :		<u>-</u> -	 		
Cur Seg Stop	_ _ _	1051	- - -	_	<u> </u>		- ·			
Cold Zone Cur Seg	_ 	1021	_ _ _	_	_ : _ :		<u>-</u> -	 	7 -	
Cold Zone Cur Seg Stop	<u> </u>	1051	- -	_ ·	 		- · - · - ·	 	<u> </u>	
	<u>-</u>	1021	- - -	_	_ ·		- ·	- · - ·		
1205 850 FHS Booster Cur Seg Stop Time	_	1021	- -	- -	<u>-</u> -	•	_ ·			
850 FHS Hot Zone Cur	_ _	1021	- -	<del>-</del>	- -		- - -	_ ·	- :	
1207/850/FHS Hot Zone Cur Seg Stop Time	<u>-</u>	1021	- -	-	<u>-</u> -		_ ·	_ ·	7 .	41121
208   850   FHS Hot Guard Cur Seg Start Time	-   -	1021	- - -	- -	_ _ _		- - -	- [:] -	-	17116
						   	-		_	_
	· 7	4	4	. 2	5.	J	999	ו וו	7	89
	· 0	3 5	8 /		5 7	٠,	19	1 2 5	80	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 12 of 38)

1	1010	ΣN	1 DATA		DESCRIPTION	MON   C	mmmmini	///////
	S E	So				Z E	,	1 -
Ю	Y O	(2)	START	END ID	IDATA VALUE		ICIRCISID	<u>-</u> :
DESCRIPTION	5 6	<u> </u>	1 - 1 - 1 - 1 - 1 - 1 - 1	VITE LETTER DE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE LA VITE	<del>.</del>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Λ . Ε
 	2 -			1 10 0			13 121	= =
 	<u> </u>		· - · -	<u> </u>	- =	TIPIFI	-	_
1209 850 FHS Hot Guard Cur Seq Stop Time	-	1021 1 1		-   -				14112
SIDS Current Segment S	_	1021	_ _ _	_	_	- - -	- -	14112
ent	_	1021 1 1	_ _ _	_	_	- - -	<u>-</u> -	14112
Experiment Main Bus C	_	1021 1 1	- -	_	_	- - -	- - -	14112
213 850 Experiment Main Bus Voltage	_	1021 1 1	- -	<u>-</u>	_	- - -	- - -	41 2
214 850 IFEA Lower Humidity	_	1021 1	- -	<u>-</u>		<u>-</u> - -	- - -	14112
	<u>-</u>	1021 1 1	- -	<del>-</del>	_	- - - -	- - -	14112
	_	1021 1 1	_ _ _	_	_	- - -	- -	14112
217 850 IFEA Absolute Pressure 2	<u>-</u>	1021 1	_ _ _	<del>-</del>	_	- - -	_ _ _	14112
Lower	<u>-</u>	1021 1 1	- - -	<u>-</u>	_	 - -	<u>-</u> -	14112
Upper	<u>-</u>	1021 1 1	- -	<u> </u>	_	- - -	- - -	14112
220 850 IFEA Water Inlet Temp	_	1021 1 1	- -	<u>-</u>	_	- - -	- - -	14112
Wate	<u>-</u>	1021 1 1	<u>-</u> -	<u> </u>	_	- - -	- - -	14112
Cold End	<u>-</u>	1021 1	- -	<del>-</del>	_	- - -	- - -	14112
122318501RFM Hot End Shell Temp	- -	1021 1 1	- -	<del>-</del>	_	- - -	- - -	14112
224 R50 RFM Water Outlet Temp	_	1021 1	- -	<u>-</u>	_	- - -	_ _ _	_
225 850 Sample 1 Temp 1	<u>-</u>	1021 1 1	- -	<u> </u>	_	- - -	- - -	_
Sample 1	<u>-</u>	1021 1 1	_ _ _	<del>-</del>	_	- - -	- - -	14112
122718501Sample 1 Temp 3	_ _	1021 1 1	_ _ _	_	_	- - -	- -	14112
228 850 Sample   Temp 4	<u>-</u>	1021 1 1	- - -	<del>-</del>	_	- - -	- -	14112
229 850 Sample 1 Temp 5	_	1021 1 1	- - -	<u> </u>	-	- - -	_	_
230 850 Sample   Temp 6	_	1021 1 1	_ _ _	<u> </u>	_	- - -	- -	14112
231 850 Sample 2 Temp 1	<u>-</u>	1021 1	_ _ _	<u>-</u>	_	- - -	- -	14112
232 850 Sample 2 Temp 2	<u>-</u>	1024 1 1	_ _ _	_	_	- - -	- - -	14112
233 850 Sample 2 Temp 3	<u>-</u>	1021 1 1	- -	_	_	- - -	<u>-</u> -	14112
234 850 Sample 2 Temp 4	<u>-</u>	1021 1 1	_ _ _	<u> </u>	_	- - -	- - -	_
Sample 2	<u>-</u>	1021 + 1	- -	- -	_	- - -	<u>-</u> -	_
236 850 Sample 2 Temp 6	_	1021   1	- - -	<u>-</u>	_	- - -	- - -	14112
1237 850 Sample	<u>-</u>	1021 1 1	- -	_	_	- - -	- - -	14112
238 850 Sample 3 Temp 2	<u>-</u>	1021 1	<u>-</u> -	- -	_	- - -	_ _ _	14112
	-		-	-				
000	. 4	4 4 4	. 2	5 5	0	9 9 9	1 11	7 8
,	0	3 5 7		· -	-	7 9 2	1 2 5	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 13 of 38)

			12121	DATAD	DATA DESCRIPTION	N MONICI	11111111111111	11111	1/
	2 2	Y 101 SOLOS			1 1 1 1 1 1 1	REQ   A		1	
	2 4	19/1-91		START! END	D IDATA VALUE!	ALUE!! L!	C RC SID	_	T
10	<u> </u>	3	FIE	1			H	_	¥
. I DESCRIPTION	) (i			WDIBTIMDIBTIX	BTIYI	IVIXICI	IT! D!	<u>-</u>	<u>B</u>
<b>x</b>	1 -1	s		=	I B I	INICIOI	3  E	<u> </u>	= =
 	포		1 101	_	<u>=</u>	TPF		a	- !
			-		-	-	- -	141	121
12391850iSample 3 Temp 3	<u>-</u> .	1 701	 			- - - -	_ _	141	121
e 3 Temp	·	1701	 	 		. <del>-</del> 	- - -	141	121
8501		1021	<u> </u>		 	· -	- - -	141	121
850 Sample 3	_ :	1071	 	 	 	 	- - -	14]	41121
850 Sample 4 Temp	- ·	170	 		 	· -	_ _	41	1121
850 Sample 4		1001	 	 	 	- - - -	- -	41	1121
Sample 4	 	1 20			·	- - -	- - -	4	41121
Sample 4 Temp	 	1001	- -		·	- - -	- - -	- 4	
Sample 4	<u> </u>	1001			. <u>-</u>	_ _ _	- - -	41	_
Sample 4	 	1 201			. <u>-</u>	_ _ _	- - -	141	_
Sample 5	 	707	 		- - 	_ _ _	<u>-</u> - -	141	
Sample 5	 	1001	 	- 	- - -	- - -	<u>-</u> -	141	1121
850 Sample 5	 	200	 	- 	. <del>-</del>	_ _ _	- -	41	_
850 Sample 5		1001	 		, <u> </u>	- - -	<del>-</del>	-	_
5		100	 	· –	- - -	- - -	- - -	-	_
'n	 	100	 	. <u>-</u>	- - -	- - -	- - -	- 4	
	 	1001			- -	<del>-</del> -	- - -	-	
و	 	1001	 	. <u>-</u>	_ 	- - -	- - -	<del>-</del>	
۰		1001	 	- 	. <u>-</u>	 	- - -	_	_
850 Sample 6	 	102	- - 		- - -	_ _ _	<del>-</del> -	<del>-</del>	
850 Sample 6 Temp	 	100	. – . –	-	_	<u>-</u> - -	- - -	<del>-</del>	_
850 Sample 6	- 	1021	· —	<u>-</u>	<del>-</del> -	- - -	_ ·	-	
850 Stepping Motor Finase A	- -	1021	_ _	_	- -	<u>-</u> - -	- - -	-	
ng Motor Phase A	- 	1021	_ _ _	_	- - -	- - -	_ ·	-	41121
ng Motor Filase B	. <u>-</u>	1021	_	_	<u>-</u> -	- - -	_ _ _	-	_
MOLOF PRIASE D	- 	1001	- - -	_	_	- -	- - -	-	_
850 Furnace Linear Post	 	1021	 	- 	. <u>-</u>	<del>-</del> -	- - -	-	_
ũ	 	200	- - -	· -	_	<u>-</u>	- - -	-	41121
	- ·	100	 		 	_		-	41121
126818501Cold Guard Heater Current	_	1071	!	- !					1 1
1 t 7 c 7 b 1 f 1 d 1 d 1 d 1 d 1 d 2 d 3 d 4 d 3 d 4 d 4 d 4 d 4 d 4 d 4 d 4	i -	- - -	<del>-</del>	_	_	<del>-</del> -	_	- 1 - 1	<u> </u>
_ <	- C	4	4 4	5 5	5 5	9 9 9	١	- 0	<b>n</b> (
	0	3	7 8	1 3		5 6 7	7 1		2

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 14 of 38)

		1010	SIWN	T.	DATA	DESCRIPTION	TION   MONICI			
NO TO ON		Σ.	01 801	X	- 1	i				
		Y O	_ !	PISTART		END IDAT	IDATA VALUE!   LI	ICIRC	CIRCISID	IE IT
	NOT I STUDIES	2 6	_			T	IEIEI.I	Ξ	9	_
 		<u> </u>	11 a	MO .	T.	WDIBTIYI	INIXICI	T. D	_	_
_ _ _	-	×	2 -	 • -	<u>.</u>		INICIOI INICIOI			<u> </u>
	1		i	-	-				_	- ;
Guard	Heater Voltage	_	1021 1 1	- -		<u>-</u> -	_	-	_	14112
SOUTCOLG Main	Heater	<u>-</u>	1021 1	- -	_	<u>-</u>	-			4112
Spoicold Main	Primary Heater Voltage	_	1021   1	_	_	_	 	 		7117
850 Cold Main		_	1021 1	_	_	- -				7117
8501cold Main	Red Heater Voltage	_	1021	_	· <b>-</b>	- <b>-</b>				41141
850 Hot Boost		_	1021	_	_	- -	 			
850 Hot Boost		_	1021 1 1	·_	_	- -	- <del>-</del>			
850 Hot Guard		_	1021 1 1	_ _	_	_		- -		; =
Guard	Voltage	_	1021 1 1	<u> </u>	_	_	· —		_	41121
obolnot Main	Heater	_	1021 1 1	_	_	_	_	- -	_	
850/Hot Main	nary Hea	_	1021 1 1	<u> </u>	_	_	· -			
850 Hot Main	Heater	_	1021 1 1	<u> </u>	_	_	· -			
850 Hot Main R	Heate	_	1021 1 1	<u> </u>	_	_	  		_	
850   Cold Zone	Block	_	1021	_	_	_	- <u>-</u>	- - -	_	
850 Cold Zone	J Bloc	_	1021 1 1	_ _	_	-				
850   Hot Zone	Block	_	1021 1 1	_	_	- -		 		
850 Hot Zone	Block	_	1021 1 1	<u>-</u>	_	- -		 		
٠,	Block	_	1021 1 1	- -	_	_	- <del>-</del>	 		
8501Sample 1	Block	_	1021 1 1	_ _	_	_				
Boulsample 2	Block	_	1021 1	<u> </u>	_	_	 			; -
Sample 2	Block	_	1021 1 1	<del>-</del>	_	_	 			
650 Sample 3	Block	_	1021 11	<u>-</u>	_	_				
1292(850(82mp) 4 03	Block	_	1021 1	- -	_	<del>-</del>		_		-
Sample 4	DIOCK	-	1051	_	_	_	<u>-</u> -	_		141121
8501cample 4	BLOCK	_	1021	_	_	<u>-</u>	- - -	_		141121
of of campie of of of of of of of of of of of of of	BIOCK	_	1021 1 1	<u>-</u>	_	<u>-</u>	_ _ _	_		-
0000	Block	_	1021 1 1	<u>-</u>	_	_				41121
osolsamble o C	Block	_	1021	<u>-</u>	_	-	-			
1850 Sample 6 C	Block Temp	_	1021 1 1	_	_	· <u> </u>	· —	 		
1298/850/Booster Heat	ter Control Temp 1	_	1021 1 1	_	_	- -		 		12 11 6 1
		-			-		- ! - ! - ! - ! - ! - ! - ! - ! - ! - !		1	171161
	_ ,	_ •			_	<u>-</u>	<u>-</u> -	_	_	-
	-,	4	7	2	2	5	999	11	7 7	80
, o		0 6	3 5 7 8	-	m	5 7	5 6 7	2	۰	, ,

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 15 of 38)

																			•																			
						- 1	_	_						-	_	-	_	=	_		_	_	_ :	7	7 6	21	7	7	2	7	7	7 (	7	7 6	. i	<b></b> 0	0 0	>
_		<b>- -</b>	<u> </u>	1 -		<b>1</b> !	~	2	2	2	40		2 2	2	2	_	2	_	_		-	_		_					_	_	-				- ,			
	! -		_	-		- :	_	4	=	:	-	:		5	7	=	=	41	41	41	7	41	41	#:	₹ ₹	41	41	=	<b>;</b>	<b>;</b>	# :	# :	# :	# =	ři			
	į s	×	•		٠ د	1	4	_	3	• •			_ =	4	_	: =	Ξ	Ξ	_	_	Ξ	<u>~</u>	_			<u> </u>	<u> </u>	_	-	-	_				- :		۰.	
7	: -		-			- ;	_																												i	•	_	-
,,,,,,,,,,,,,,,,,	i	CIRCISID				•																													- 1	- 0	٠.	0
	! ?	7 2	:			ij														_	_		_	_				_	_	_	_	_	_		- i		_	
	į	=======================================				- !	-	-							_		_	_	_	_	_														- !			
-	! (	2 5	; :	3 14	4	i																	_	_				_	_	_	_	_	_		– i			
_	i	= -				- !	-	-									_	_	_		_	_										_	_		_ !	(	- (	
$\geq$	_ :	9 5	2 :			_ ;	_										-	_	_	_	_	-	_	_				_	_	_	_		_		- ;			<b>~</b>
																																_	_		_ !			
_	_					_ ;	_											-	_	_	_	_	_	_	_		_	_	_	_	_	_	_		_ i			
C	<		٠ ‹	2   X   V	2	<u>.</u>											. –			_	_	_	_	-	_			-	_	-	_	-	_		- !	_		_
MONIC	REOIA	T	4	¥ (	5	ā. i	i															_	_	_				. —	_	_	_	_	_		— Ì			
Q	ĕ	! :	- :	= :	= :	<u> </u>	-		-	-		_							_	_	_							_	_	_	_	_	_			_	•	
			= :	_:	=	_				_	_	-							-	-	_	_	_	_	_			-	_	_					į	_	9	S
	ŀ	띨					•																												ŀ			
	i	ゴ					i																												•			
. Z	!	<					1																												1			
: =	i	_					į																												!			
	1	2					1																	_					_	_	_	_	_	_	<b>-</b> i			
: =	i	₹.	_	_	_	_	į -		_	-	-	_	_									_	_	_	_										!	_	S	_
! %	1	IDATA VALUE	E	≥ :	4	=	١.		_	_	_	_	_									-	_	_	_				_	_		_	_	_	- ;			
DATA DESCRIPTION			1	WD BT   WD   BT   Y			į																												_ 1	_	S	S
! <u>भ</u>	1	END	!	<u>.</u>	_	_	١.	_	_	_	_	_	_	_										-	-				_	_		_	_	_	-	! 		
; -	i	ធ		≏			į																													-	2	C
! 5	1		<u>-</u>	3	=	_	١.	_	_	_	_	_	_	_	_									_	_	_			_	_	_	_			_			
1 2	i.	-		드			į																											_		: <b>-</b>	\$	-
! 0	1	~	1	<u>=</u>	_	_	١.	_	_	_	_	_	_	_	_									_	_	_			_	_	_	_	_		_	i		
į –	ij	START		2	_		!																										_		_	!		
! _		2	느	<u>.</u>	=	_	١.	_	_	_	_	_	_	_	_	_									_	_			-	-	_	-	_	_	_	i —	~	8
1 5	>	=	ω				!	_	_		_		_	_	_	_									_	_					-	-	-		_	! _	_	_
181	5	_	<u></u>	Ξ	$\overline{x}$	<u>=</u>	i	_	_																	_							. –		_	i T	•	•
	: Ξ	=	_	_			1	_	_	_	_		_	_	_	_	_																			! _	-	S
1 2	ő	9	3	۵	S	_	i										_									_								-	_	į	-	
WN	S0105 10 1 X	<del>-</del>	_	_	_	_	1	~	7	2	~	~	7	7	≂	7	05	02	7	3	2 5	3 6	200	3 6	5	07	02	2 6	; 6	3	5	6	20	02	02	!		~
1 1	Š	0					i	6	0	02	02	02	07	07	0	05	9	9	200	2 9	2 9	2 9	2 5	2 5		_ =	2	= =	_ =	- =	_ =	_ =			_	į		
! =	-		_	_	_	-	-	_	_	_	-	_		_	_	_	_																			;		
i							1																													! -	4	0
1 =	2	Ya	9	O E	_	_	1	_	_	_		-		_	_	_	_	-	-							_	_								_	i	- ო	9
1 5	) V	- 0		)	=	×	Ţ			_				_	_	_	_	_	_		<u>.</u> .					. —	_								_	!		
! -			_	_	_	-	ï	_	_	~	; -		_	~			~	8																		i		
i							ł		_		、~	C		. α	Temp l	7	Temp 1	۵.	- 1	7																1		
1							i	8	Temp	Temp.	Temp l	4	LE	Temp	ď	Temp	Ë	Temp	Temp	Temp	_			<u>-</u>	_		_		=	4	=	2	= .	=	_	i		
1							-	a	e.	•		1	ĕ	16	2	5	ĕ	Ĕ	ē	ē	õ	_	7	H 19n	1 C 1	3	High	3	11611	8 C	11611	3 7	511	1 0 H	LO	;		
i							i	Ě					•		H	-			<b>(-</b>	-		g.	-	Ξ.	3 =	: 3	Ξ	: ند	Ξ.	ă :	<b>-</b>	: בֿ	= -	: <b>=</b>	: 🗅	!		
!							i	Temp	7	7	5 ~		• 👨	0	-	_	0	0	7	<u> </u>	Ξ.	ē										1		1	1	i		
i							1		~	Control	Catro		Control	Control	Control	Cont rol	Prim Htr Control	Control	Cont rol	Cont rol	Rotary Position	Arm Temp					-		_		_	_ ,	_ ,			1		
- 1			2				i	Control	5		3		2	=	يد	يد	2	Ž	يد	يد	۵.	Ē		Calibration	Calibration	Calibration	Calibration	Calibration	Calibration	Calibration	Calibration	Calibration	Callbration	Calibration	ibrat ion	į		
•			NOTEGIGOR	2			1	-	: 0		3 (	) (	ی ر	ິດ	Ö	ŏ	ပ	ŭ	ō	ō	>	~		<u> -</u>		-	-	<u> </u>	<u>.</u>	-	<u> </u>	3 :	<b>-</b> -	 -	-	1		
- 1			F				ij	3				ا به	• [			Ü			O	Ç	Ħ	ы		י ב	, פ	ם נ	٦	Ā	٦	ē,	ē .	9	9	9	9	į		
			٥				-	۶	Hear or	•	ard Heater C	: :	Prim net Dod Hrr (	ž			Ξ	Htr	Red Htr	Ήr	ند	Alignment		ž.	<u>, i</u>		Ä	×	ĭ	ž	ä	2	<u>.</u>	בַּ	ă	1		
i			٥	2			i				٠.		ĨÌ	: I	Hearer	Heater	=	Ξ	보	포	2	ē	۵.	# :	# 4	: =	=	= :	= :	= :	= :	= =	= =	= =	=	1		
- !			- 5	נ			-	8			2 -	Ξ.	-3 τ	י כ	, ~	. ¥	E	E		_	Ξ	፸	Ē	፲ ·	<b>=</b> -	= =	7	7	7	፯ '	Ξ,	፭ ′	<u> </u>		. T	i		
i			Š	ذ			ij	4	אק מים ב	:	Ž	٠.	E TOO	7	9	<u> </u>	ᅼ	Prim	Ď	Red	CAM	₹	Temp	ű :	ວິເ	ن د	ပ	ပိ	ပ	ũ	ິວ ເ	ũ	ŭ (	ن ز	3 3	1		
			-	2			1				ຫໍ	-					م	بھ	ž	ž	$\ddot{c}$	4		٠.				_	_		Δ.	ω,	۰ م	- م	٠.	i		
í							į	3	ב ל ל	3	ard	5	5		1	ard	ے ا	c	<b>=</b>	5	Ę.		ack	_	- `	* * * * * * * * * * * * * * * * * * * *	,	, ,	٦.							1		
1							- 1	١	u :	š		9	E				-	=	=	Ξ	Ē	9	ø	×	×	× ×	×	×	š	š	š	ž	Š	<u> </u>	ž	í		
į								4	9 (	י כ			Σź	Ě	Ě		Y	Ž	ž	£	×	3	Ę	ź	ź:	žź	Ξź	ź	₹	Ī	Ξ	Σ		<b>2</b> 3	ĒĒ	1		
ì							i	1	_	9	1850 Cold	٥,	י ס	7	, `						e	8	5	0	۰ م	IBSOLKTD MUX	0	۵	۵	Ω	۵	Δ.	_	0	ם ב	į		
į									8 7	נס זם	7	7	70		3 6	Hot	Hot	9	5	್ಟ	ĕ	Ē	Ē	Ξ	<u> </u>		E	E	RTD	RTD	RTD	RTD	RTD	RTD	RTD	١.	_ c	<b>5</b> F
1							i		ă d	ڌ	ŭθ	Ũ	ن ز	ن ز	ة ز	c =	: =	Ξ.	Ξ	Ξ	=	<u>≤</u>	<u>s</u>	<u>=</u>	三!	<u> </u>	- =	Ξ.	<u>"</u>	=	=	=	=	= :	==	· į		
1	_	Z	Ξ.		-		- :		= ;	5	5	5	5 6	5 2	5 6	5 2		0	0	ō	ō	ō	0	0	9	2 0	0	ŏ	õ	0	20	20	20	9	50		- 0	4 ر
- 1							,	i	920	820	ر يق	ũ	850 Cold		ŭ	950	3 5	850 Hot	35	35	35	35	35	95	82 /	27 Y	. 60	60	99	<b>B 5</b> 0	ä	æ	æ	60 6	18501	1		
- 1	_	2	2	<u> </u>	<u> </u>	<u>:</u> .	_		= 9	_	=	<u>~</u>	= :	<u>~</u> :	~ -	_ =			=	- =	. =	=	Ξ	_	=	= =	==	=	=							i .	- (	۰ ر
i	_								5	2	=	2	Ξ:	304	2 >	30.6	3081850	30.6	310	311	312	313	314	315	316	3171	2 6	320	3211	322	323	35	325	2	7 7	1 1		
1		ENT	Š					, (	53	300	301	3021	3	<b>≒</b> ?	1305185016514	<u> </u>	í ř	, <del>~</del>	, ~	,	9	~	m	2	<u></u>	<u> </u>	2 ~	2	$\Xi$	3	_	=	_	=				
- 1	_	=	_		_	-		1 -	_	_	_	_	_							_	_	_	_	_				_										

TABLE 1.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 15 of 38)

	Clu I	E	1T	DATA	DESCR	DATA DESCRIPTION	Œ	MONICI	_	111111111111111111111111111111111111111		
IN D	<u>-</u>	lotsolos		1 1 1 1	1		_	REQIAI	<u>i</u>			
	DIA IG	1/6	<u>a</u>	START   E	END ID	DATA VALUE		T	<u> </u>	CIRCISID	3 O	II.
R .   DESCRIPTION	_	_	Ξ		T	_	<u> </u>	E	<u>_</u>	IOINC	<u>-</u>	IA :
_	UE	I a	_	WOLBTIWDIBTIY	BTIY	_	≥	VIXICI	H	<u>_</u>	4	_
	_ _	_	<b>±</b>	<b>*</b>	<u>-</u>	_	Z	NCIO	~	<u>ы</u>	=	1
	K	01 /I	_	_	<u>田</u>	_	E	PIFI	_	_	<u> </u>	_
299 850 Booster Heater Control Temp 2	0	021 1	  -    -	-	-		<b>-</b>	<b>-</b>   -	-	-	-	1121
ter Control Te		021	. <u>-</u>	·		_		- <b>-</b>				1 2 1
		021	_	· –			-	- -				1 0
850 Cold Main Prim Htr Cntrl 1	-	021	-	- - -	-							41121
303 850 Cold Main Prim Htr Chtrl Temp 2	_	021	_	_	· _		-					
850 Cold Main Red Htr Control	<u>-</u>	021	_	· –	-		-	- -	_			
850 Cold Main Red Htr Control	<u>-</u>	021 1	_	_	_	_	_	<b>-</b>	_	_	_	41   2
850 Hot Guard Heater Control Temp	<u>-</u>	021 1	<u>-</u>	_	_	_	_	<u>-</u>	_	_	-	41   2
850 Hot Guard Heater Control 1	_	02	_	_	<u>-</u>	_	_	<u>-</u>	_	_	_	1 2
850 Hot Main Prim Htr Control Temp	<u>-</u>	021	_ _	<u> </u>	<del></del>	_	_	<u> </u>	_	_	_	41   2
850 Hot Main Prim Htr Control	<u>-</u>	021	_	<u> </u>	<u> </u>	_	_	<u>-</u>	_	<u>-</u>	_	1   2
850 Hot Main Red Htr Control Temp	<u>-</u>	02	_ _	_	_	_	<u>-</u>	<u>-</u>	_	_	_	1   2
850 Hot Main Red Htr Con	<u>-</u>	021	_ _	<u> </u>	_	_	_	<u> </u>	_	_	_	1   2
850 Indexing CAM Rotary Po	<u>-</u>	021	_ _	_	_	_	_	<u>-</u>	_	_	_	41   2
BS0 Ampoule A	<u>-</u>	021	_ _		<u>-</u>	_	_	<u>-</u>	_	_	_	41   2
850 SEM Track Temp	<u>-</u>	021	_	_	_	_	_	<u>-</u>	_	_	_	41   2
850 RTD Mux 1 Calibration -	102	<del>-</del> -	_ _	_	<u>-</u>	_	_	<u>-</u>	_	_	_	1121
1 Calibration -	105		_	_	_	_	_	_	_	_	_	41   2
850  KTD Mux 2 Calibration -	102		_ _	_	_	_	<u> </u>	_	_	-	_	1   2
Mux 2 Calibration -	105		_	_	_	_	_	<u>-</u>	_	_	_	1   2
650 KID MUX 3 CALIBRATION =	102	7	_	_	_	_	<u>-</u>	_	_	_	<u>-</u>	1   2
850 RTD Max 4	701						_:	<u> </u>			-	-
850 RTD Mux 4 Calibration -		021			<b>-</b> -		<del>-</del> -				-41	
1	102							 			7 7	7
850 RTD Mux 5 Calibration -	1 102		· -		-						7 -	~ -
850 RTD Mux 6 Cali	102		- - -	-	_			- - -			4 1	
6 850 RTD Mux 6 Calibration -	1 102	2 - 1	_	_	_		-	-	-		- 4	
7 850 RTD Mux 7 Cali	1 102	- - - -	_		_		-	- -	-		141	
328 850 RTD Mux 7 Calibration - Low	102	21	_	_	_		-	- -	_	-	41	-
	-	-	-		-		-		-	-	-	-
0 0 0	4	4	•	- 12	- 12		- v	- 40	- r	- ۲		- a
_	0 3	5 7	· &	1 3	5 7		9 69	· ~	1 2	, ru	· œ	۰ ۵
•									1	,	,	,

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 17 of 38)

. 6 1   1   1   1   5   6   5   7   5   6   1   1   1   1   1   5   5   5   7   7   7   7   7   7   7	1 1 1 1 1 1 1 1		1 1 1	1 1 1 1 1	1 1 1	 	 			
	lcln	I MN I NM I S I T	111	DATA	DESCRIPTION	PTION	MONICI			
- N C- E23-	S W	Y lol solos i	I X I C	)		1 1 1 1 1 1 1	_		 	
	N I O	16.1/61	P START		END IDA	IDATA VALUE	_	CIRCISID	<u>의</u>	
	9		F E		L	_	E   E   .	-	×	
	10 E		OM III	WDIBTIWDIBTIY	BTIY		IVIXICI	T1 01	_	
	-			-	<u>a</u>		INICIOI		<u> </u>	
	X	: = !	- 10	- -	<u>=</u>	_	TIPIF	<u>-</u> -	ID IE	
			1	-	-				141121	
359 850 Unused	_	1071	_				 			
136018501Cold Guard Zone Setpoint Temp	<u>-</u>	1021	_	_	_ _	_	- · - ·	 		
136118501Cold Main Zone Setpoint Temp	<u>-</u>	1021	<u>-</u>	_	_	_	- ·	_ ·		
8501Booster Zone Setpoint Te	<u>-</u>	1021	_	<u>-</u>	_	_	- - -	- -	_	
850 Hor Main Zone Setpoin	_	1021	_	_	<u>-</u>		- - -	_ _ _	_	
850 Hor Guard Zone Setpoint	_	1021	_	_	<u> </u>	_	<u>-</u> - -	- - -	_	
BSOLCOLD Guard Hrr	_	1021	<u>-</u>	_	- -	_	- - -	- - -	_	
8501Cold Guard Hrr Calc	_	1021	<u>-</u>	_	- -	_	- - -	- -	41121	
BSOLCOTO COMPT.	_	1021	<u>-</u>	_	<u> </u>	_	- - -	- - -		
1301 030 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	_	1021	_	_	_	_	- - -	- -	_	
	. <u>-</u>	1021	_	_	_	_	- - -	<u> </u>	141121	
SOCIOLO MAIN ELIM MET CALC	. <i>-</i> -	1021	_	_	_		<u>-</u> - -	- - -		
OSO   COTO   MAIN   FILM   MET CATO	- 	1021	- -	_	_	_	- - -	<u>-</u>		
1830 Cold Mail Ned III. Cate		100	- -	_	_	_	<u>-</u>	<u>-</u> -	14112	_
850 Cold Main Red Hir Caic Temp	 	100		. <u>-</u>	· -		- -	_	14112	_
850 Booster Htr Calc Temp	 	200	 				- - - -	_	14112	_
1374 850 Booster Htr Calc Temp 2	 	1020	 				- <del>-</del> 	. – . –	_	_
	 	100		 		_	 	 	_	
ed	- ·	170	 				- - - -	- -		_
Main Prim Htr Calc Temp	<u> </u>	1021	<u>-</u> -	 	<b>-</b> -		  	 	. –	
Main	<u> </u>	1021	<u> </u>				 	 		
Main Red Htr Calc Temp	_	1021		<u>-</u> -	<u>-</u> -		 	 	-	
Main Red Htr Ca	_	1021	<u> </u>	 	 		 	 		
Temp	<u>-</u>	170	<u>-</u> .	- ·	<u>-</u> -		 	 		
13821850 Hot Guard Htr Calc Temp 2	_	1021	_ ·	- ·	- ·		 	 		
383 850 Unused	<u>-</u>	1021	_	_			 	 		
13841850 Unused	_	1021	<u>-</u>	<u>-</u>	_	_	- · - ·	 		
138518501Cold Guard Zone Act Temp	<u>-</u>	1021	<u>-</u>	_	_	_	- · - ·	- · - ·		
138618501Cold Main Zone Act Temp	<u>-</u>	1021	<u> </u>	- -	<del>-</del>	_	- · - ·	<u>-</u> .		
718501Booster 20	<u>-</u>	1021	<u>-</u>	<u>-</u>	<u> </u>	_	<u>-</u> -	_ ·		
8 850 Hot Main	<u>-</u>	1021	<u>-</u>	_	- -	_	<u>-</u> -	- - -	7116	_
1		-		-		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	-	ı
	<b>- ·</b>	- •	- •	- u			. v		7 8	
0 0 0	5	4	4.	n .	0 (					
3 67	0 6	3	7 8	٦ ک		_	2 6 /	٠ 7 1		

	1010	SIMNINMI	ISITI	DATA	DESCRIPTION	TON IMONICI	///////////////////////////////////////	////	1////
	S E	ISOIOSIOIX	101Y1-		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	REQ   A		1 1 1 1	
	V I O I	16.1/6	<u>-</u>	START! E	END IDATA	VALUE     L.	ICIRCISID	_	E   T
DESCRIPTION	<u>9</u> –	<u>3</u>	FIEI-	:-	I	IEIEI.	ONIOIIOI	0	I Y
- <del>- R</del> -	OIE	<u>-</u>	<u>M</u> — II	I WD   BT   W[	BTIWDIBTIY	IVIXICI	TI DI	_	P 181
	<u> </u>	- -	#   <u>x</u>	<del>-</del>	<u>-</u>	INICIOI	13 E1	_	1 11.1
	- K	<u>-</u>	<u>-</u>	- -	<u>=</u>	ITIPIE	- - -	_	D IE!
1389 850 Hot Guard Zone Act Temp.	- -	1021		- -				 	41121
1850 Cold Guard Zone Del	_	1021	_ _ _	<u>-</u>	_ _	- - -	_ _ _	_	41121
850 Cold Main Zone Delta	_	1021	_	_	_ _		- -	_	41121
850 Booster Zone Delta Te	<u> </u>	1021	_ 	<b>-</b>	_	- - - -	- - -	-	41121
Hot Main Zone Delta	_	1021	_	_	_ _			_	41121
394 850 Hot Guard Zone Delta Temp	_	1021	_ _	_	- -	- - -	- -	_	41121
	_	1021	<u>-</u>	<u> </u>	- -	- - -	- -	_	41124
850 Cold Mai	_	1021	<u>-</u> -	_	- -	_ _ _	_	_	41121
	_	1021	<u>-</u> -	<u>-</u>	- -	_ _ _	<u>-</u>	_	41124
§50 Hot Main	<del>-</del>	1021	<u>-</u> -	<u>-</u>	<u>-</u> -	_ _ _	- - -	_	4112
R50 Hot Guar	_	1021	<del>-</del> -	<u> </u>	- -	_ _ _	- - -	_	41121
400 850 Cold Guard Zone Prop Power	_	1021	_ _	- -	<u>-</u> -	_ _ _	- -	_	41121
-	_	1051	_ _	- -	<u>-</u> -	_ _ _	- - -	_	41121
850 Booster Zone F	_ _	1021	_ _ _	- -	_ - -	_ _ _	- - -	_	41121
850 Hot Main Zone E	<del>-</del>	1021	_ _ _	- -	- -	_ _ _	- - -	_	41121
850 Hot Guar	<u>-</u>	1021	_ _ _	<u>-</u>	- -	_ _ _	- -		41121
Gua	_	1021	<u>-</u>	<u> </u>	- -	_ _ _ _	- -	_	41121
	_	1021	_ _ _	<u> </u>	- -	- - -	<u> </u>	_	41121
407 850 Booster Zone Int Power	_	1021	_ _ _	- -	- - -	_ _ _	- - -	-	41121
Main Zone 1	<u>-</u>	1021	_ _ _	- -	- -	- - -	<u>-</u>	_	41121
Suard A	_	1021	_ _ _	- -	- -	- - -	- -	_	41121
Į.	_	1021	_ _ _	- -	- -	<del>-</del>	- -	_	41 2
850 Cold Mai	<u> </u>	1021	_ _ _	<u> </u>	_ 	- - -	- -	_	41121
850 Booster Z	_	1021	<u>-</u> -	<u>-</u>	- -	<del>-</del> - -	- -	_	41121
31850 Hot Main Zone P	<u>-</u>	1021	_ _ _	- -	- -		<u>-</u> -	_	41121
ס	_	1021	- - -	- -	- - -	- - -	_ _ _	_	41121
415 850 Cold Guard Htr Calc Voltage	_	1021	<u>-</u>	_	- -	_ _ _	- - -	_	41121
416 850 Unused	_	1021	<del>-</del>	<u> </u>	_ _ _	_ _ _ _	- - -	_	41121
141718501Cold Main Prim Htr Calc Voltage	<u>-</u>	1021	- - -	<u> </u>	- -	_ _ _	<u>-</u> -	_	41121
418 850 Cold Main Red Htr Calc Voltage	<u>-</u>	1021	- - -	_	_ _ _	- - -	_ _ _	_	41121
	-		-	-			-	-	-
	۰ ۳		- •	ي - ص	- u	ی ۔		٠, ر	- α
	r (	rc	F C	) r	י ר י		- (	- 0	0 0
7 9 5	ν Ο	<b>,</b>	œ -	٠ -	۲ ر	٥	7	20	>

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 19 of 38)

	1 1	1 1 1	1 1 1 1 1	1 1 1	ļ						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11111	-
	0101	WN NW	MISIT	δ	DATA DE	DESCRIPTION	TION		_ ;	<u>:</u> -	1111	,,,,,	- <del>-</del>
	S	solosl	12101	1 1 1	1	1 1 1 1	1 1 1 1 1 1 1	- KE	KEULAI				
ENTICNI	N I D	16.1/	181	START	END	O IDA	IDATA VALUEI IL	<u>   -</u>	<u>-</u>	5	CIRCISID	4 2	
NO. IO OI ON I	<u></u>		FIE	1	1	T		<u>교</u>	- -	<u>-</u>	nitolia.		<u> </u>
-	9 6	-		WDIBTIWDIBTIY	QM	BTIYL		<u>-</u>	VIXICI VIXICI	Ξ	ā		<u> </u>
R _	1 -		2		-	d		Z	NICIOI		ᇤ	_ 	=
	 			. –	- - -	<u>=</u>		E	TIPIF	<u>-</u>	_	<u>a</u>	<u>=</u>
	- 1	- !		.	1	1 1 1	1 1 1		1	1	1 1 1 1	1	
	-	1001	-	_	_	_		<u> </u>	<u>-</u>	<u>-</u>	_	41	
419 850 Booster Htr Calc Voltage	 	200	 	- <b>-</b>	· -	. <del>-</del>		_	_	_	_	41	121
1420 850 Unused	_ ·	700	 		- 			_	_	_	_	4]	121
Prim Htr Calo	- -	1701	- ·		 			-	-	_	_	141	121
14221850 Hot Main Red Htr Calc Voltage	- -	1021							- 	-		41	_
142318501Hot Guard Htr Calc Voltage	_	1021	_						- -			141	
	<u>-</u>	1021	<u>-</u>						 			141	121
142518501Cold Guard Htr Act Current	<u>-</u>	1021	_ ·						- -	. <del>-</del>	-	41	121
850 Unused	_	1021	- · - ·	<u>-</u> -	- <i>-</i>			-	- -	_		141	41121
1850 Cold Main	<u>-</u>	1071	- ·	<del>-</del> -					- 		. –	141	41   2
142818501Cold Main Red Htr Act Current	_	1021	_						- -	_	_	41	121
429 850 Booster Htr Act Current	_	1021	- · - ·	<u> </u>					- -	-		41	121
147018501Unused	<u>-</u>	1021	_						- 	-	-	141	121
143118501Hot Main Prim Htr. Act Current	<u>-</u>	1021	<u>-</u>	_					 	-		141	
_	<u>-</u>	02	<u> </u>	<u>-</u>	_				 			141	
Guard Htz	_	102	<u>-</u>	_	_	_	_		 			1 7	
ed.	_	102	<u>-</u>	- -	_	_			<b>-</b> -		<b></b>	141	-
1434 B30 Condidand Htr Calc Resistance	_	102	_	<u> </u>	_	<u> </u>			<u> </u>			141	
	<u>-</u>	1021	<u>-</u>	_	_				 			141	
143218501ColdMain Prim Htr Calc Resistnce	_ _	1021	_	_	-		_		 			4 1	
: =	_ _	102	<u>-</u>	<u> </u>	_	<u> </u>			 			. 4	41121
8501800ster Htr Resistance	<u> </u>	1021	<u>-</u>	<u>-</u>		<del></del> -			 			4	41121
	<u>-</u>	1021	<u>-</u>	_	<b></b> .				 			4	41121
144118501HOTMAIN Prim Htr Calc Resistance	- -	1021	_	- -		<u> </u>			 			4	41121
	- -	02	_	_	_	- ·			 		- 	4	41121
144318501Hot Guard Htr Calc Resistance	<u>-</u>	102	_	- -		- ·			 		- 	4	41121
	<u>-</u>	102	_	- -	_	<u> </u>			 			4	41121
1445 BEOLD Old Guard Htr Limited Power	<u> </u>	102	<del>-</del> -	<u>-</u> -	_	- ·			 		 	. 7	41121
1443   030   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COLG   COL	<u> </u>	102	<del>-</del>	<u>-</u>	_	- -			 			1 7 7	
440 000 00000000000000000000000000000	<u> </u>	102	<u>-</u> -	_	_	- -	_	_	- ·		<u>-</u> -		
Red	-	102	<u>-</u>	- -	_	- -	_	-	- - -	-	- i	r   - !	-,
	1 -	-	-			-	1		_	_	-	_	-
	- ·	- •	- <		- v	س -		و.	9	1 1		1	30
0 0 0	ر 1	<b>.</b>	יים פרנ			ים נ		7	_	1	\$	8	0
	0	~		•	<u>-</u>	n		,		•	•		

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 20 of 38)

ENTIC N	1010	NNINE	MNINMISITI	DATA	DESCRIPTION		/////	111111111111111111111111111111111111111	1////
	2 2	201001	-	TADT		IDIOTED TO COMPANY AND COMPANY			i
	9 -	3			END   DAT	1010	CIRC		
<u>~</u> .	IOIE	<u> </u>	<u> </u>	DIBTIM		I NIXICI			P - A
 	<u>.</u>	<u>s</u>		<del>-</del>	<u>-</u>	INICIO	2   E	· –	_
	<u>-</u>	<u> </u>	- ia-	- -	<u>=</u>	TIPIE	_ _	_	D   E
144918501Booster Htr Limited Power	_	1021	  -  -	  -	-			-	1111
850 Unused	_ _	1001	- -	_	 				17117
850 Hot Main	_ _	1051	- -	_	-	- <del>-</del>			
1452 850 Hot Main Red Htr Limited Power	_	1051	- - -	· –	- - -				
453 850 Hot Guard Htr Limited Power	_	1021	- - -	·	 				
850 Unused	_	1021	- - -	-	- - -	  			17117
455 850 Cold Guard Htr Des Current	_	102	- - -	_	- -	-			
	<u>-</u>	1021	_ _ _	_	_ _ _	-			
<u>_</u>	<del>-</del>	1021	- -	<u>-</u>	- -		- - -	_	_
850 Cold Main Red Ht	_	1021	_ _ _	<del>-</del>	<u>-</u> -		_		
14391830 Booster Htr Des Current	<u>-</u>	1021	_ _ _	- -	- - -	_ _ _	_	-	_
850 Unused	_	1021	<u>-</u>	<u> </u>	- - -	_			-
850 Hot Main Prim Htr Des	_	1021	<u>-</u>	_	<u>-</u> -		-		; ;
	<u>-</u>	1021	_ _ _	<u>·</u>	- -	- - - - -	- -	. <u>-</u>	
14631850 Hot Guard Htr Des Current	_	102	_ _ _	_	<del>-</del> -		- - -		-
850   Unused	<u>-</u>	1051	_ _ _	_	- -		- -		
850 Cold Guard Zone	_	1021	<del>-</del>	_	_ _ _	- - - -	- - -		
_	<u>-</u>	1021	_ _ _	<u> </u>	- - -		· –	- <del>-</del>	=
cone 5	<u>-</u>	1021	- - -	_	<del>-</del> -		- -	. <del>-</del>	7
Main Zone Saturation F	_	1021	_ _ _	<u>-</u>	_ _ _		- -	. <del>`</del>	=
Satura	<u>-</u>	1021	<u>-</u> -	<u>-</u>	<del>-</del> -		_		=
147010501Integral Power Fault Time	_ :	105	- -	_	<u>-</u> -	- - -	<u>-</u> -	<u>-</u>	41121
Jun Deila	- ·	1021	 	_	_ _ _	- - -	- -	-	41121
esolidate incegral dall	- : - :	1701	_ _ _	_	_ _ _	- - -	_	-	41121
esoftaute floboletional Gain	_ : _ :	1051	_	_	<u>-</u> -	_ _ _	- -	-	41121
osofraut intermediate Calc. Value		1021	- -	<del>-</del>	- - -	- - -	- -	-	41121
Intermediate C	_	1021	_ _ _	<b>-</b>	- -	_ _ _	- -	-	41121
Power - Prev	_	1021	_ _ _	_ _	- -	- - -	- -	-	41121
D.	_	1051	_	<u> </u>	- -	_ _ _ _	- -	-	41121
4/6 83U raulted Zone	_	1021	<u>-</u>	-	_ _ _	<del></del> 	<u>-</u>	-	1121
	-	-	-	-	-			-	 
_	3.4	4	4	. 2	ی .	- v2 - v2 - v2	- r		- 0
3 67	0 6	3 5	7 8		5 7	5 6 7	1 2	- 00	0 0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 21 of 38)

	Iclu	- WN I NW I	ISITI	DATA D	DESCRIPTION	 	111111111111111111111111111111111111111	111111	
IENTIC NI	IMIS IDIA		OIY		END   DATA VALUE		CIRCISID	3	- <u>-</u> :
	9	3 9	F E	T   T	T  RT Y	E  E  .	ITI DI	× 2-	<u>8</u>
- <del></del>	<u> </u>				i d	NICIOI	3   E	= =	
 	<u> </u>			- - -	E	TIPIE		1 0	<u> </u>
	-	1001	-				- - -	141	21
479 850 Integral Gain Array 1	 	1021		- - 	_		- - -	141	5
1 Gain	. <u>-</u>	1021	<u>-</u>	_	<u>-</u>	- - -	<u>-</u> -	-	
850 Integral Gain	<u>-</u>	1051	_	_	<u>-</u>	_ ·	 	14112	7 6
	_	1021	<u></u> -		 		 	14112	7 -
850 Proportional Gain	 	170	<del>-</del> -	 	 	  	. <u>-</u> 	141	7
850 Proportional Gain	 	1021	 	- 	- -	_ _ _	- - -		7
486 850 Proportional dain Array 3		1021	. <u> </u>	- -	_	- - -	- - -	141	
850 Proportional	<u> </u>	1021	<u>-</u>	_ _	- -			41	7 6
850 FF Ampoule Align	<u>-</u>	1021	_ ·	_	_ ·		 	141	7 6
850 FF Ampoule Align Extended	<u>-</u>	1051	_ ·		 	  	 	1 4 1	10
850 FF Ampoule Align Mtr RCCB	_	1051	_ ·	- ·	 	 	 	141	1 ~
850 FF Ampoule Align Mtr R	_ ·	1021	 	 	 		 	411	2
1850 FF Car Trk Extr Right	<u>-</u> .	1001	<u> </u>	<b>-</b> -			- - -	41	7
850 FF Car Trk Extr Right	 	1001	 				- - -	141	12
850 FF Car Trk	 	1001	 	 	-	  	- -	41	121
850 FF Car Trk Exci Lett		1021	. <u>-</u>	. <u>-</u>		- - -	- - -	141	_
Gap	- - <del>-</del>	1021	- - -	_	<del>-</del>		_ ·	141	
1850 FF Indexing Cam No	_	1051	_ _ _	- -	_ · _ ·		 		7 0
1850 FF Indexing	<u>-</u>	1051	_ _ _	<u> </u>	 		 	21181	2 0
1850 FF	_	1021	_ ·	- ·	 		 	141	2 -
850 FF Ampoule Processing	<u>-</u>	1021	 :		 		 	1 7	2
1850 FF SEM Index Motor RCCB On S	_	1021	 	 -	 		 	141	2
850 FF SEM Index Motor RCCB	<del>-</del>	1021	_ ·			 	 	1 7 7	
1850 FF Fail Safe Brake RCCB	<u> </u>	1021	<u> </u>		 	 	 	1 7	
<b> 850 FF Fail Safe Brake</b>	_ _	1021	- · - ·	 			 	7 7	
18501FF Core Hold Down	<u> </u>	1021	_ ·	 	 		 	1 4	
508 850 FF Core Hold Down Retracted	<u>-</u>	1021	- ! - !	-		- ! !			- 1
1	-	  -	_	_	- -	- - -	- -	_	_
- c	. W	4	4	5 5	5 5	999	1 11	7	φ,
	0 6	3 5	1 8	1 3	5 7	267	1 2 5	80	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 22 of 38)

- Z	101	¦	MNINMISHT	DATA	DESCRIPTION			111111111111111111111111111111111111111		
NO 10 01	<u>n                                    </u>		-11101s010s	TOTAL STANT	ATACL CNR				i i	- :
<u>~</u>	DESCRIPTION	<u>-</u>	<u>, =</u>		ITI	VALUE   ===   L.		CIRCISID DIIOINO.	X	
<u> </u>		- 3	_	WDIBTIWDIBTIY	IBTIYI	IVIXICI		T 0	<u>a</u>	<del>-</del>
 	171	_		<del>*</del>	141 -	INICIO		<u> </u>	11	_
-			D	- -	<u>=</u>	TIPLE	_	- -	ID IE	<del></del>
15091850 FF Core	Hold Down Not Extended	1021	- - -		-		-		14112	ı <del>.</del>
	Hold Down Extended	1001	_ _ _	_	- - -		· -		14112	
		1021	- -	_	<u>-</u>	-	· -	- <b>-</b>	14 17	
21850 FF	웊	1021	_ _ _	· –	_ 		- - -		14112	
1850 (FF	le Support	1021	<u>-</u> -	<u>-</u>	<u>-</u>	<del>-</del> -	_	- -	14112	
4 BOOFF	le Support Retr	105	- - -	<u>-</u>	_ _ _	<u>-</u> -	_	_	14112	_
ا بد ا بد	le Support	105	<u> </u>	_	<u>-</u>	- - -	<u>-</u>	<del>-</del>	14112	_
111000	le support secure	1021	_ :	_	<u>-</u>	<u>-</u> -	-	_	14112	_
0.00	le spt Plt Mtr RCCB	1001	_ ·	_ ·	 	<del>-</del> -	<b>-</b>	_	14112	_
11000	ie spiem Mar Marach	1701	· - ·	_ ·		_ _	<b>-</b>	_	14112	_
152018501FF Ampou		170	 	 	<u> </u>	_ ·	_	_	14112	_
850 FF	<u> </u>	1021	 	 	 		- · - ·	<b>-</b>		_
850 FF	Fility RCCB	201	 		 		 		_ ;	
850 FF	m Bus Relay	1001	 	 			 	 		
850   FF	m Bus Relay	100	 	 - <b>-</b>	 					
1850   FF	ce Position	1021	 		 		 	 	14112	
	lace Position Home	1021	- - -	- - –	- - -		 			
850   FF	Extrme Trvl Not Exceeded	1021	_ _ _	- -	_				14112	
850   FF	Extrem	1021	_ _ _	_	_	· -	-	- - 	-	
850 FF	Motor Drive RCCB	1021	_ _ _	<u>-</u>	<u>-</u>		- -	· -	-	
3018501FF	Motor Drive RCCB (	1051	<u>-</u> -	<u> </u>	<del>-</del>	_ _ _	_	_	14112	
3118501FF	Motor Clutch RCCB	1021	<u>-</u> -	-	<u>-</u> -	_ _ _	<u>-</u>	_	14112	_
321850188	Motor Clutch RCCB	1021	<u>-</u> - -	- -	<u>-</u> -	- - -	<u>-</u>	_	14112	_
331850188	XIATION Mtr RCCB	1021	<u> </u>	<u>-</u>	<u>-</u> -	- - -	<u> </u>	<u>-</u>	14112	_
34   830   F.F.	Xlation	1051	_	- -	<u>-</u> -	_ _ _	_ _	_	14112	_
3518501FF		1021	- - -	<u> </u>	- -	_ _ _	<u> </u>	_	14112	
361850 FF	Xiation Clutch RC	1051	<u>-</u>	_	- -	_ _ _	_	_	14112	_
/18504FF	Inlet Valve RCCB	1021	- - -	<u> </u>	- -	_ _ _	_	<u> </u>	14112	_
15381850 FF Water	r Inlet Valve RCCB On {	1021	- - -	<u>-</u>	<u>-</u> -	-	_	-	14112	_
_ _ _			<del>-</del>	-					-	1
0 0 0	) E	4	4	. S		999	, ,	-	- 00	
9	0 6	3 5	7 8	1 3	5 7	5 6 7	1 2		, 0	

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 23 of 38)

•		- WN I NW	SITI	DATA	DESCRIPTION	TION	MONIC	_	,,,,,,,,,,,,,,,,,,,,,,,	1111	1///
ENTIC N	SIW	os S	IX 101	1			- ( REQ   A		110010	! -	- E
NO.10 01	<u>v 10</u> -	- 3 - 3 - 3 - 3	FIEI	- 1	ENU   UAT	IDATA VALUE			CIRCISID DIIOINO.	 	
<del>.</del> –	IOLE	_	OM II	I WD   BT   WD   BT   Y	BTIY		IVIXIC	_	T DI	<u>-</u>	B
	11		- X	<del>-</del>	I IP		INICIO	_		Ξ	I.L.
	<u>×</u>		- - - -	_	<u> </u>		TIPIE	_	<del>-</del>	=	E
153918501FF Vacuum Vent Valve Closed		1021		· -		   	-	_	  -	_	41121
018501FF Vacuum Vent Valve	_	1021	_	_ _	_		- - -	_	- -	-	11121
18501FF Vacuum Vent Vlv RC	_	1021	_	_	_		- - -	_	- -	<u>`</u>	41   2
1850IFF Vacuum Vent VIV	- -	1021	_	_	_ _		_ _	_	<del>-</del>	-	41121
1850 FF IFEA	_	1021	<u>-</u>	_	<del>-</del>		<del>-</del> -	_	- -	÷	41121
1850 FF IFEA	<u> </u>	1021	_	_	_ _ _		- - -	_	- -	÷	_
1850 FF IFEA ABS Press 1	_	1021	_	_	<u>-</u> -		<del>-</del> -	_	<u> </u>	÷	_
850 FF IFEA A	<u>-</u>	1021	_	<u>-</u>	- - -		<u>-</u> -	_	- -	<u>-</u>	_
850 FF Argon Fill	<u> </u>	1021	_	<u>-</u>	<del>-</del> -		<u>-</u> -	_	_	<u>-</u>	_
850 FF Argon Fill Valve Open	_	1021	_	_	_ _ _		- - -	<u>-</u>	- -	÷	_
850 FF Argon Fill Valve	<u> </u>	1021	_	_	<u>-</u> -		- - -	_	<u> </u>	<u>-</u>	_
850 FF Argon Fill Valve	<u>-</u>	1021	<u>-</u>	- -	<u>-</u> -		- - -	<u> </u>	_	_	_
Indexing Jog CW S	<u>-</u>	1021	_	_	<del>-</del>		- -	- -	_	<u>-</u>	_
850(FF SEM Indexing Jog C	<u>-</u>	1021	<u>-</u>	_	- -		- - -	<u> </u>	<u> </u>	-	_
553 850 FF Ampoule 5 Failure 2 Status	_	1021	<u>-</u>	_	_ _ _		- - -	_	_	_	
850 FF Ampoule 5 Failure 1	<u>-</u>	1021	<u>-</u>	_	- - -		<u>-</u> -	_	<del>-</del>	-	-
ule 4 Failure 2	_	1021	_	_	- - -		<del>-</del> -	_	_	÷	
850 FF Ampoule 4 Failure 1	<u>-</u>	1021	<u>-</u>	<u>-</u>	<u>-</u> -		- -	_	<u> </u>	<u>-</u> .	
57 850 FF Ampoule 3 F	- -	1021	_	<u> </u>	_ _ _		- - -	_	_	_	
58 850 FF Ampoule 3 Failure 1	 	1021	_	_	<del>-</del> -		- -	_	<b>-</b>	_	
59 850 FF Ampoule 2 Failure 2	_	1021	<u>-</u>	_	_ - -		<u> </u>	_	_	_	
60 850 FF Ampoule 2 Failure 1	_	1021	<u>-</u>	_	<u>-</u> -		_	_	_		
61 850 FF Ampoule 1 Failure 2	<u>-</u>	1001	_	<u>-</u>	- -		<u>-</u> -	_	_	-	
_	<u>-</u>	1021	<u>-</u>	<u>-</u>	<del>-</del>		- - -	_	- -	_	
563 850 FF Water Outlet Valve Bypass	_	1021	<u> </u>	- -	_ _ _		- - -	_	<u> </u>	_	_
1564 850 FF Water Outlet Valve Normal	_	1021	<u>-</u>	<u> </u>	_ _ _		_ _ _	_	<del>-</del>	_	41   2
1565 850 FF Water Outlet Vlv RCCB Off	_	1051	<u>-</u>	- -	<u>-</u> -		<u>-</u> -	_	<del>-</del>	_	41121
1566 850 FF Water Outlet Vlv RCCB On	<u>-</u>	1021	<u>-</u>	- -	<u>-</u> -		<u>-</u> -	_	_	_	41   2
156718501FF Water Inlet Valve Bypass	<u>-</u>	1051	<u>-</u>	_	- -		<u>-</u> -	_	- -		41121
568 850 FF Water Inlet Valve Normal	<u>-</u>	1051	<u>-</u>	_	<u>-</u> -		<u>-</u>	_	<del>-</del> -	_	41121
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-	-	-	, 1 1 1 1		-	! ! !	! <b>-</b>	-
- <	- 7	- 0	4	می . می .	ۍ . ص		 	7		7	- ac
3 6 6	. O	r (5)	7 8	) L	5 7		2 6 7	_	. 2	- 60	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 24 of 38)

		lc I u	SIMNINMI	F	DATA	DATA DESCRIPTION		MONIC	<u> </u>	<i>mmmm</i>	1111	
ENTIC NI		S E	015010	<del>-</del> 7	ŀ		1 6 1 1 1	KEC! A		0-00-0		-
		<u>V</u> 0	_ =	FIFIE	KT.	END IDATA	VALUE	1 2 2 2 1		CIRCISID		- 4 - ×
<u>.</u> -	DESCRIPTION	2 1		a a	BT	BTIX					_	
 		=======================================			=	<u>a</u>		NICIO	- -	- E		= -
 - 		포			_	<u>=</u>	_	TIPIE	_	- -	_	D IE
33103818361	Mach Dulston Mod RCCB Off	<u> </u>	1021					-	-   <u>-</u>	<u> </u>	-	4112
7018501	Pulsing Mod BCCB	- -	1021	- - -	_			- -	_	_	_	4112
95015	ridge 6 Eatline 2	- 	100	- - 	-	- -		- -	-	_	_	4112
0000	Cartiflaye o failure 2		1201	 	-	- - - -		· -	· –	- -		
200	Cartridge 5 Fallure 2	- -	1021		-	- - -		. – . –	_	_	_	4112
<u>. E</u>	Cartridge 5 Fallure 1	- -	1021	- - -	_	_ _ _		<u> </u>	_	_		4112
850 F	Cartridge 4 Failure 2	- -	1021	_	_	_ _ _		<del>-</del>	_	_	_	4112
	Cartridge 4 Failure 1	_	1021	_ _	_	- -		<u>-</u> -	_	- -		4112
15771850 FF	Cartr	_	1021	_ _	_	- -		<u> </u>	_	<u> </u>	_	=
157818501FF	Cartr	<u>-</u>	1021	_ _	_	_ _ _		<del>-</del>	_	- -	_	4112
18501	Cartr	<u>-</u>	1021	<u>-</u>	_	<u>-</u> -		<del>-</del>	- -	- -	_	_
15801850 FF	Cartr	_	1021	_ _	_	<u>-</u> -		<u>-</u> -	_	- -	_	_
1850	Carti	<del>-</del>	1021	_	_	_ _ _		<u> </u>	_	- -	_	_
1582 850 FF	Cart	_	1021	_ _	_	_ _ _		<u> </u>	_ _	_	_	_
158318501FF	Ampo	_	1021	_	_	- - -		_ _ _	_	<del>-</del>	_	_
_	Ampoule 6 Failure 1 S	<u>-</u>	1021	_	_	_ _ _		_ _ _	- -	<u> </u>		_
	Hot Boost Mod A	<u>-</u>	1021	<u>-</u>	_	_ _ _		_	_ ·	<u> </u>		_
_	Hot Boost Mod A RC	<u>-</u>	1021	<u> </u>	_	_ _ _		- -	_	- -		_
158718501FF	Cold Main Red Mod	<u>-</u>	1021	_	_	_ _ _		<u> </u>	_	_	_	-
8	Cold Main Red Mod RCCB On	<u>-</u>	1021	_	_	<u>-</u> -		_	_	_		_
	Cold Main Prim Mod	<u>-</u>	1021	_	_	_ - -		_ ·	_	- ·		
159018501FF	Cold Main Prim	_	1021	<u>-</u>	<u> </u>	_ _ _		_ ·	_	_		_
15911850 FF	Cold Guard Mod	<u>-</u>	1021	_	<u> </u>	<u>-</u> -		_ _ _	_	- -		_
8		<u>-</u>	1021	_	-	<u>-</u> -		- -	_	- -		_
_	Peltier Conn Retracted-Not	<u>-</u>	1051	_ _	_	<u>-</u> -		<u>-</u> -	- -	_		_
159418501FF	Peltier Conn Retracted	<u>-</u>	1051	<u> </u>	-	- -		- - -	<del>-</del>	<del>-</del>		_
1595 850 FF	Peltier Conn Extended-Not	<u>-</u>	1021	<u>-</u>	_	<u>-</u> -		- - -	- -	<del>-</del>		_
159618501FF	Peltier Conn Extended	<u>-</u>	1021	_	_	<u>-</u> -		_ _ _	<u> </u>	<u> </u>		_
15971450 FF	Peltier Conn Motor RCCB Off	_	1021	_	-	_ _ _		_ _ _	_	_		4112
1598 850 FF	Peltier Conn Motor RCCB On	<u>-</u>	1021	<u>-</u>	_	<del>-</del> -		<u>-</u>	_	_		41   2
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	-	-	- -		  -	-		<u> </u>	. – !
		. ~	4	- 4	ی .		9	. 9	7	,	۲	80
				. a	, -	) L		ر ح	-		00	· C
3 6		س ح	s C	р -	7	·	7	٠	٦			)

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 25 of 38)

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	!	1			1 6			1 2	OTNOM	-		///////////////////////////////////////		////	
_	1010	_	Σ	MNINMISIT		DATA	<u> </u>	Z	DESCRIPTION		PEOL	, -	<u> </u>		. !	. !	_
	S   W   S	_	So	SolosiolY	1	   -   (	1 4	2	CALL TOWARD VALUE	1151		-	2	CIRCISID	_	E IT	_
0 01 001	V I O I	9	<u>ဗ</u> :	<u>.</u>	¥10			T 1		<u>-</u>	<u> </u>	_	<u>a</u>	DITOINO.	_	×	_
	9 :				1 03	YITH UMITE UNI	4	· >			OIXIO	. <del>.</del> .	Ē	₫	_	P IB	_
	3 - 10 - 1				=			4	_	<u> </u>	NICIO	10		Ξ	_	_	_
	<u> </u>		2 >	<u> </u>	. – . –	-	. <i>–</i>	<u>—</u>		_	TIP	F	_	_	_	0 <u>E</u>	_ !
		1 0	1		1 -	-	-	-		-	-	-	i –	: ! !	_	4112	_
159918501FF Peltier Pulsing Drv R		102	_	_ ·							_		_	_		4112	· 
1850 FF Peltier Pulsing Drv	RCCB On	102	_								- 	-	_	· –	_	4112	_
REDIFF SCS A	_	102	_	<u> </u>								-	-	_		4112	_
ASOIFF PDS A	_	102	_											. <i>–</i>		4112	_
1850 FF PCS	_	102	_	_ ·								-	- <b>-</b>	·		4112	_
1850 FF PCS Airflow 1 State		102		<u> </u>							-	-		· –		14112	7
1850 FF Hot Main Red Mod B	RCCB Off	102		<u> </u>								· -	_	_		1411	21
1850 FF Hot Main Red Mod B	RCCB On	701								-	-	_	_	_		141.	21
1850 FF Hot Main Red Mod A	RCCB Off	707	- :							-	-	. <u>-</u>	_	_		1411	7
850 FF Hot Main Red Mod A R	RCCB On   1	102	_ :						· 	-	. –	. <u>-</u>	_	_		1411	7
1850 FF Hot Main Prim Mod B		701	<del></del> :	 						_	-	. <u> </u>	-	_		141	21
850 FF Hot Main Prim Mod B	RCCB On 1	701	- :	 							. <b>–</b>	_	_	_		_	7
850 FF HotMain Prim Mod A	RCCB Off	701	_ :	 						_	_	_		_		41	21
850 FF HotMain Prim Mod	CCB On 1	701									-	_	_	_			21
850 FF Hot Guard Module		70		 							_	_	-	_		41	21
850 FF Hot Guard Module	B On I	70									_	_		_			21
850 FF Hot Boost Mod B	ott	2		 			- <del>-</del>	-		_	_	_	_	_		141	7
8501FF Hot Boost Mod B RC	uo .	701		 							_	_		_		1411	51
850 FF Hot Main Prim Htr		701		 						_	-	_	_	_		141	21
850 FF Cold Main		701	7 6	 			- 			_	_	_	_	_		141	
8501FF TC Group A		70		 				-	. –		-	_	_	_		41	
roup A		701					· -	-	. –	_	_	_	_	_		141	7
FF TC Group A Calibra	on Type N	2 5	170				-	-		_	_	_	-	_		141	7
FF Cold Guard Heater C	Temp 2	2 9	170					-		_	_	_	_	_		141	
1850 FF Cold Main Prim Htr	Ctl Temp 21	2 9	7 .								_	_	_	_	_	141	7
18501FF Booster Heater Ctl	Temp 2	<u>-</u>	021										-			141	121
BSOIFF		o- '	021									. <u>-</u>	-	_		141	121
ASOIFF HOL	l Temp 2	<u>-</u>	021	_	_								-	. –		141	121
BSOIFF HOT	Temp 2	<u>-</u>	021	_	<u> </u>						- 		-			141	121
1850 FF TC G	ion Type Bl	_	021	_	_	_ :	- ; - ;	- ¦	- !	1	- i	-	- !		. 1	i ! !	1
1		1 -	-	-		-	_	_	_	-	_	_	-	_	_	_ ;	_ <
-	- ~	- 9	- 47	4	~	S	٠.n	2	5	9	9	ڡ	_	_	- ,	_ ,	o c
000	10	٠ .	ک ا	-	Œ		~1	5	J	n	9			2	ر د	20	>
. 2 .		,	,	•	,	ı	ı										

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 26 of 38)

ENTIC NI		CIU	TISIMNIMNI	IISITI	DATA	DESCRIPTION		MONICI		1111111111111	111	
10 01 ON	-	2 4	100	5	14047	THE CANAL			1		!	- :
	DESCRIPTION	<u> </u>	2 3				VALUE		<u></u>	CIRCISID	<u>의</u> :	
<u>«</u>	-	2 =	= =	3	_	7 E G	_ :		2	ONIOTIO	<u>×</u> :	¥
		1 -	2 -				<u> </u>	2 X X	Ξ-	_	<u>-</u>	<u>-</u> 8
 				<u>.</u>	<b>=</b> -	<u>.</u>	2 (		~	<u></u>	=	=
		- !		-	- !	<u>.</u>		TIPIFI	_	_	<u> </u>	<u>=</u>
	Group B Calibration Type S	_	1021	-	- -				-	- -	1 7 7	1 -
16301850 FF TC	Group B Calibration Type	_	1001	- - -	- <b>-</b>			 				
	Coolant Flow #2 Status		2 0	 		- · - ·		_ ·	_	-	_	_
850 FF	Coolant Flow #1		1701	 	 	 		<u>-</u>	_	_	-41	_
1850 IFF	o 4 Temp 1		1701	- ·		<u>-</u> .		_ _ _	_	_	41	_
1850 FF	יים טיים		701	 		 		_ : _ :	<u> </u>		41	_
518501FF	. ~		200	 	 	 		<u> </u>	_	_	-41	
1850 IFF	- 0		70	 	- ·		_	- -	<u> </u>	_	-41	_
1850 FF	Y Y		1701	 	 	 		_ ·	_	_	<u>-4</u>	121
1850 IFF	roun D Calthratton Time		700	- ·	- · - ·	 	-	_	<u> </u>		-	151
BSOIFF TC	Group D		701	<u>-</u> -	- ·	 			_	_	4]	151
BSOIFF TC	Group D Calibration Two		1701	 		 		_	_	_	4	5
850155 701	Guard Boator Ct. Tone 1		1701	- ·		_	-	- -	<u>-</u>	_	4	121
3310581	Main neares out		1701	_ ·	_ _	- -	_	<u>-</u>	<u>-</u>	_	141	5
31050155	Main Prim Htr		1051	<u> </u>	_	<u>-</u> -	-	_ _ _	<u> </u>	-	41	121
	er nedler CLI 16		107	<del>-</del>	- -	<u>-</u> -	-	- -	<u>-</u>	_	141	121
SIBSOLEE HOL	Guard Heater Ct. Temp 1		1021	<u>-</u>	_	- -	_	<u> </u>	_	_	141	121
SIGNOIRE IC	oup C Calibration Type	_	1051	_ _	<u>-</u>	_ _	-	<u>-</u>	_	_	141	121
JI JUNE IC	oup c calibration Type	_	1021	<u>-</u> -	<u> </u>	_	-	<u>-</u>	<u>-</u>	_	4 ]	15
BOOKE TO	oup c calibratic	_	1051	<u>-</u>	_	<u>-</u> -	-	_	_	_	41	121
a. [	aln		1021	_ _ _	_	_	-	<u>-</u>	_	_	141	121
950055	, r	_	1021	<u>-</u> -	- -	<u>-</u>	_	<u>-</u>	<u>-</u>	_	4]	121
000			1021	_	_	<u>-</u>	_	<del>-</del>	_	_	41	121
11000	ים ע	_	1021	 -	_	<u>-</u> -	_	<u>-</u>	<del></del>	_	141	121
e. [	е С.	_	1021	<u>-</u>	_ _	<del>-</del>	-	<u>-</u>	<u>-</u>	_	4 1	121
850 FF	a a		1021	_ _	_ _	<del>-</del>	_	_	_	_	141	121
. i	41) 	_	1051	_ _ _	_ _	<u>-</u>	-	_	_	_	141	2
850 FF	5	_	1021	<u>-</u>	_	_		_	- -	-	171	2 -
850 FF	~- 61		1021	_	_	_ _	-	- <u>-</u>	- -		[ 7	2 2
71850 FF	e 6 Temp	_	1021	_ _	_	- -	_		- - <b>-</b>		7 7	2 -
16581850 FF Samplo	ple 5 Temp 2	_	1021		_	- -	_	- - -			7	
			-					-	-	-		- !
- 0	- (	- <b>-</b>	- <	- <b>•</b>		— ·	<u> </u>	_	<del>-</del> !	-	_	_
) · ·		ت ت د	<b>4</b> .	عاد م	ر د .	5 - 5	9 9	9	7	7	٦	<b>&amp;</b>
Þ	,	0	3 2	7 8	1 3	5 7	5 6	~	2	S	œ	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 27 of 38)

	ICIO	TISIMNIMI	SITI	DATA	DATA DESCRIPTION	ON IMONICA	///////////////////////////////////////		1///
ENTIC N	Y O	1801081		START! E	END IDATA	VALUE     L.	[CIRCIS]	ED IE	T
	9	3				E   E   .	IDITOLN	~	Y
	IOLE			WDIBTIWDIBTIX	BTIXI	INIXICI	IT! Di	<u> </u>	<u>B</u>
	- 17	5	= ×	<del>*</del>	I d l	INICIO	?  E	Ξ	<u>-</u>
- <b>-</b>	<u> </u>		1 101	_	IEI -	TIPIF	- - -	<u>a</u>	<u></u>
CERTIFICATION A TORN 2		1021	-				- - - -	-	41121
BSOURE SAMPLE 4 T		1021	- -	- 	· –	- - -	- - -	-	41121
Sampte 2		1021	_	- -	- - -		<u>-</u>	-	41121
Sample 1		1021	- -	_		_	- - -	-	1121
FF Sample 6	· <u> </u>	1021	_ _	_	<u>-</u>	- - -	- - -	_	Ξ
FF Sample 5	_	1021	<u>-</u>	_	<u>-</u> -	- - -	- - -	-	_
FF Sample 6	<u>-</u>	1021	_	_	<u>-</u> -	- - -	- - -	-	_
FF Sample 5	<u>-</u>	1021	<u>-</u>	_	<u>-</u> -	- - -	- - -	-	11121
FF Sample 4	_	1021	_	_	<del>-</del> -	<del>-</del> - -	- - -	<u>-</u>	11   2
Sample 3	<u>-</u>	1021	<u>-</u>	_	<u>-</u> -	_ _ _	- - -	<u>-</u>	11   2
FF Sample 2	<del>-</del>	1021	<u>-</u>	- -	- - -	<u>-</u> - -	- - -	<u>-</u>	11121
Sample 1	_	1021	_	<u> </u>	_ _ _	_ _ _	- - -	<u> </u>	11   2
Sample 6	<u>-</u>	1021	<u>-</u>	<u> </u>	- -	- - -	- - -	÷	41121
Sample 5	_	1021	<u>-</u>	- -	- - -	- - -	- - -	<u> </u>	_
850 FF Sample 4	<u>-</u>	1021	<u> </u>	- -	<del>-</del> -	- - -	- - -	<u>-</u>	_
Sample 3	_	1021	<u>-</u>	<u> </u>	<u>-</u> -	- - -	_ _ _	_	_ :
Sample 2	<del>-</del>	1021	<u>-</u>	- -	<del>-</del> -	_ _ _ _	- - -	_	
Sample 1	<u>-</u>	1021	<u> </u>	<u> </u>	<del>-</del> -	- - -	- - -	<u>-</u>	_
Sample 6	_	1021	<u>-</u>	<del>-</del>	<u>-</u> -	<del>-</del> - -	_ _ _		_
	_	1021	<u>-</u>	<del>-</del>	- - -	- - -	_ _ _		_
1679 850 FF Sample 4 Temp 4	<u>-</u>	1021	<u>-</u>	- -	<u>-</u> -	- - -	- - -	-	
Sample 3 Tem	<u>-</u>	1021	<u> </u>	- -	- -	<u>-</u> -	_ ·		Ξ:
681 850 FF Sample 4 CJ Block Temp 1	_	1021	_ _	- -	<u>-</u> -	 	- -	_	_
Sample	_	1021	_	_	<u>-</u> -	_ _ _	_ _ _		_
Sample 3 CJ Block Temp	<u>-</u>	1021	<u>-</u>	_	<u>-</u> -	_ _ _	_ ·	_	-
	- -	1021	<u>-</u>	<u>-</u>	- -	_ _ _ _	- -	_	٠,
168518501FF Sample 2 CJ Block Temp 1	<del>-</del>	1021	<u> </u>	- -	- - -	- - -		_	41   2
686 850 FF Sample   CJ Block Temp 2	<u> </u>	1021	_	- -	<u>-</u> -	- - -	- -	_	_ ;
687 850 FF Sample   CJ Block Temp	_	1021	<u>-</u>	<u>-</u>	<u> </u>		_ ·		_
688 850 FF RFM Water Outlet Temp	<u> </u>	1021	- -	<del></del>	<u>-</u> -	- - -	- -	- !	41121
	-	-	-	-	-		- -	-	 
	- (r.	- 4	- 4		. 2	9 9 9	1 11	7	ထ
) (	0	 	7 8	_	5 7	5 6 7	1 2 5	80	0
, o .		) 7	,	•			i .		

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 28 of 38)

	1010	TISIMNINE	DATA DESCRIPTION		///////	1//////
ENTIC NI	SIW	X	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	REQIAL	. !	. !
INO.10 01	V I O I	IG. I/G! IP START	TI END IDATA VALUE	1	ICIRCISID	) IE IT
IR .   DESCRIPTION	9 -	I IW IFIE	L		ID I TO I NO	_
- R -	IUIE	III IMDI	BTIWDIBTIYI	IVIXICI	11 01	<u>-</u>
- -	<u></u>	#     x   s	P	INICIOI		=
	×		- - -	TIPIF	- - -	131 Q1
689 850 FF Cold Zone CJ Block Temp 2	  -  -	1021 1 1 1				41 2
IFF Cold Zone CJ Block	_	1021 1 1 1	_		- -	_
691 850 FF Hot Zone CJ Block Temp 1	_ _	1021 1 1 1	_ _ _		_ _	Ξ
850 FF Hot Zone CJ Block	_	1021   1   1	  		_ _	141121
850 FF RFM Hot End	_	1021   1   1	_ _ _	- - -	- - -	141121
850 FF RFM Cold End Shel	_	1021   1   1	- - -	- - -	- - -	141121
850 FF IFEA Water Inlet 1	<u>-</u>	1021 1 1 1		- - -	_ _ _	141121
850 FF IFEA Water	<u>-</u>	1021 111 1	- - -	_ _ _ _	- - -	141121
850 FF RTD Mux 3 Calibration -	_	1021 111 1	_ _ _ _	_ _ _ _	- - -	141121
850 FF RTD Mux 3	<u>-</u>	1021 1 1 1	_ _ _	- - -	- -	141121
850 FF RTD Mux 2 Calibration -	_	1051 1 1 1	_ _ _	- - -	- -	141121
850 FF RTD Mux 2	<u> </u>	1021 1 1 1	_ _ _	- - -	_ _	141121
850 FF RTD Mux 1 Calibration -	<u>-</u>	1021 1 1 1	_ _ _	- - -	- -	141121
850 FF RTD N	_ _	1021 1 1 1	- - -	- - -	_ _	141121
703 850 FF IFEA Upper Atmosphere Temp	<u>-</u>	1021 1 1 1	- - -	- - -	_ _ _	141121
850 FF IFEA	_	1021 1 1 1	- - -	_ _ _	- -	141121
850 FF	_	1021   1   1	- - -	- - -	- -	141121
850 FF SEM Track Temp	_ _	1021 1 1 1	- - -	- - -	- -	141121
850 FF Ampoule A	<u>-</u>	1021 1 1 1	_ _ _	_ _ _	<u>-</u>	141121
850 FF Sample 6 CJ	<u>-</u>	1021   1   1	_ _ _	- - -	<u>-</u> -	141121
850 FF Sample 6	_	1021 1 1 1 1	_ _ _	- - -	<u>-</u>	141121
171018501FF Sample 5 CJ Block Temp 2	_	1021 111 1	_ _ _	- - -	- - -	141121
850 FF Sample 5 CJ	_	1021 1 1 1	_ _ _	_ _ _	_ _ _	141121
850 FF Sample 4 C	_	1021 1 1 1	- - -	- - -	_ _ _	141121
	_	1021 1 1 1	- - -	- - -	- -	141121
1714 850 FF Cold Main Red Heater Voltage	_	1021 1 1 1	_ _ _	- - -	<u>-</u>	141121
1715 850 FF Cold Main Primary Heater Cur	_	1021 1 1 1	_ _ _	- - -	<u>-</u>	141121
17161850 FF Cold Main Primary Heater Volt	_	1021 1 1 1	- - -	- - -	- -	141121
718501FF Col	_	1021 1 1 1	_ _ _	- - -	- - -	141121
718 850 FF Cold Guard Heater Voltage	_	1021 1 1 1 1	_ _ _ _	- - -	<u>-</u> -	141121
						-
- C	- 7	. P V V	- ند کما - کما -	- u - u - u		- a
	7 6	, c		0 7 3		•
٥	ر ت	ر م ا	7 0 7	2 0 7	ر 2 - ا	

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 29 of 38)

	1010	HMNINMISITI DATA DESCRIPTION	WON   C	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1111111
ENT C N	N S	1 1 5 2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	ID!A	SI IPISTARTI END I		ICIRCISID	<u>ы</u>
IR .   DESCRIPTION	<u>9</u> –	<u>ਜ</u>	- <u> </u>	-	_
- <del></del>	I O I E	III   WD BT WD BT	INIXICI	11 D	В .
	==	_ _ _ _			_
	<u>×</u>	131 1 1 1 101 /1 1	TIPIFI		1D  E
13101850185 BTD Mix 8 Calibration - Low	- -	1021	- - -	  -  -	141121
1950 FF OID May 8 Calibration -	· -	1021	- -	<del>-</del>	141121
ofolgs one was 7 collected	 		- - -	_	141121
MUX / CALIDIACION -			· -	- - -	-
asoler all man / carrotacton		102	- - -	_ 	141121
850/FF RID Mux 6 Calibration -		102	- - -	- -	141121
850FF RTD Mux 5 Calibration -	- -	1021	- - -	- - -	_
850 FF RTD	_	1021 1 1 1 1 1 1 1	- - -	- - -	141121
8501	_	1021 1 1 1 1 1 1 1	- - -	- - -	
1728 850 FF RTD Mux 4 Calibration - High	<u>-</u>	1021 1 1 1 1 1 1	- - -	<del>-</del> -	141121
850 FF IFEA Lower Humidity	_	1021 1 1 1 1 1 1	_ _ _	_ ·	141121
1730 850 FF Rapid Translation Motor RPM	_	1021 1 1 1 1 1 1	- -	 	141121
850 FF Indexing CAM Ro	<u>-</u>	1021	_ ·	_ ·	141121
1732 850 FF Furnace Linear Position	_	1021 1 1 1 1 1 1	_	_ ·	
850 FF Stepping Motor Phase B	_	1021 1 1 1 1 1 1	_	_	_
Stepping Motor Phase B	_	1021   1   1   1	_ ·	_ ·	141121
850 FF Stepping Motor Phase	_	1021   1   1   1	  	- · - ·	141121
850 FF Stepping Motor Phase	_	1021			
850 FF Hot Main Red	<u>-</u>	1021	  		
Hot Main Red Heater Volt	_	1021   1   1   1		 	
Hot Main Primary Heater	<u>-</u>	1021	 	 	141121
IFF Hot Main Primary	<u> </u>	1021 1 1 1 1 1	 	 	141121
FF Hot Guard Heater	<u> </u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	 	
FF Hot Guard Heater	<u> </u>	1 1 1 1 1 1 1 701		 	
FF Hot Boost Heater	_	101111111111111111111111111111111111111		 	
1850 FF Hot Boost	<u> </u>	1071 1 1 1 170	- ·	 	
17451850 FF SMS Board Velocity Reading	_	1021	_	_ ·	-
1746 850 FF Experiment Main Bus Voltage	<u>-</u>	1021 1 1 1 1 1 1	_ _ _	·	-
17471850JFF Experiment Main Bus Current	<del>-</del>	1021	- - -	_ ·	_
1748 850 FF IFEA Absolute Pressure 2	<u>-</u>	1021 1 1 1 1 1 1	- - -	- ! - !	141121
			_ _ _	-	_
	- ~	4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	9 9 9	1 11	٦ 8
	. 0		5 6 7	1 2 5	0 8
	,		:		

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 30 of 38)

ı			MN   NM   S   T	I DATA		DESCRIPTION	MONICI	11111111111111	1111	1///
1NO.10 01	<u>¥ 0 </u>		3 5	START	END I	END   DATA VALUE	-   KEQ!A	CIRCISID	ID LE	- <u>-</u>
	DESCRIPTION	_	3		1	_		ONIOIIOI		
- <del>R</del> -	INIE	<del>-</del>	10 11	I MD I BT I	BTIWDIBTIY	=	IVIXICI	IT D	- I	181
- -	IFI	-		_ _ <b>=</b>	<u>-</u>	_			=	_
-	- X	-	1/ 101	- ; - ;	3 - 1	_	ITIPIFI	- -	₽	<u>=</u>
174918501FF	IFEA Absolute Pressure 1	102	  -  -	_ _ _	     		  -  -  -	-	7	11121
175018501FF	IFEA Upper Humidity	102	_ 	<u>-</u>	_	_	_ _ _	_	<u> </u>	11121
100118511RC	SEM Index Motor RCCB On Stat	102	_ _	_ _ _	<u>-</u>	_	- - -	-	-	41121
100218511RC	SEM Index Motor RCCB Off Stat!	102	_ _	_ _ _	<u>-</u>	_	- - -	_	-	41121
1851 JRC	Ampoule Not Processing	102	_ _ 	_ _ _	_	_	<u>-</u> - -	<del>-</del> -	-	41121
1851 IRC	Ampoule Processing	102	_ _ 	_ _ _	<u> </u>	_	- - -	- - -	<u>-</u>	41121
851   RC	king Cam	102	_ _ 	- - -	- -	_	- - -	- - -	-	_
1851 JRC	exing Cam Stowed	102	_ _ _	_ _ _	- -	_	- - -	- - -	-	4112
1851 IRC	Plt Gap	102	_ _ _	_ _ _	_ _	_	- - -	- - -	-	41121
851   RC	Spacer Plt Gap	102	_ _ 	_ _ _	<u> </u>	_	- - -	- - -	-	41121
851 JRC	Trk Extr	102	_ _ 	<del>-</del> -	<u> </u>	_	- - -	- -	<u>~</u>	41121
851 JRC	Car Trk Extr Left Limit	102	_ _ 	_ _ _	- -	_	- - -	<u>-</u> -	-	41121
1851   RC	Trk Extr	102	_ _ 	<u>-</u> -	- -	_	- - -	<u>-</u> - -	-	41121
1851   RC	11ght	102	_ _ 	- - -	<u>-</u>	_	<del>-</del> - -	- - -	-	41121
851 IRC	Align Mtr	102	_ _ 	_ _ _	_	_	<u>-</u> - -	<u>-</u> -	-	41121
1851 IRC	Align Mtr	102	 	- - -	<u>-</u>	_	- - -	<u>-</u> -	7	41121
1851 IRC	Align	102	<del>-</del>	- - -	_	_	_ _ _ _	<u>-</u> -	-	41121
851 IRC	Align Exte	102	_	_ _	_	_	<del>-</del> - -	- - -	-	41121
851 JRC	-	102	_	_	_	_	- - -	<del>-</del> -	7	41121
851 IRC	Align Retracted	102	_ _ 	- -	<u> </u>	_	<u>-</u> - -	- - ÷	-	41121
851 IRC	Spt Plt Mtr RCCB	102	_ _	- - -	_	_	- - -	_ _ _	-	41121
851 JRC	Spt Plt Mtr	102	_ _ _	- -	<u>-</u>	_	<del>-</del> - -	- - -	-	41121
851   RC	Support	102	<u>-</u> -	- -	_	_	- - -	- - -	-	_
1851 IRC	Support Sect	102	<u>-</u> -	- - -	<u>-</u>		- - - -	- - -	-	41121
8511RC	Support	102	_ _ _	_	_	_	- - -	- - -	-	41121
1851   RC	ule Support Ret	102	<del>-</del>	- -	_	_	- - -	- - -	~	41121
102518511RC (	Core HD Motor RCCB Off	102	_ _ _ _	- - -	<u> </u>	_	- - -	<u>-</u> -	-4	11121
851   RC	otor RCCB	102	_ _ _	_ _ _	<del>-</del>	_	- - -	- - -	-	41121
1851 I RC		102	_ _ _	<u>-</u> -	<u> </u>	_	- - -	- - -	-	41121
102818511RC	Core Hold Down Extended	102	- - -	- -	<del>-</del>	_	- - -	- - -	-	41121
		-		-		1			-	-
_		7	0 4 4	ی .	ی .		. ve		۲	- α
3 6 7		. 0	5 7 8	· -	, 5		, ,		· œ	) C
•		י	) - )	-	,	•		7 7	5	>

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 31 of 38)

	1010	I MN   NM   S   T	_	DATA DESCRIPTION	MON   C	1111111	111111111111	= =
	S E	010810					1 1 1 1	-
<del>-</del> 0	N I D I A		START	END IDATA VALUE	JE     L	ICIRCISID	ID IE	Ē
DESCRIPTION	<u>9</u>	_		T	IEIEI.I	IDITOLN	۰. د	¥
	IUIE	ID   I	INDIBT (WD   BT   Y	BTIY	IVIXICI	IT! D!	<u>a</u>	18
	<u>=</u>		<u>-</u>	IP	INICIO	13   E1	-1	<u> </u>
_	<u>-</u>	Ial /I -	 _ _	E	TPF	- - -	<u> </u>	=
1029 851 RC Core Hold Down Not Retracted	_ _	1021	-	-			141	121
1030;851;RC Core Hold Down Retracted		1021	. <u>-</u>	· <del>-</del>	- - - -	 	14)	2
1031   851   RC Fall Safe Brake RCCB Off	- -	1021	·	· -	- - - -	· -		2
IRC Fail Safe Brake	. <u>-</u>	1021	- - -	· <del>-</del>	 	- - -	- 4	
103318511RC Rapid Xlation Clutch RCCB Off		1021 1 1	_	_	- - - -	- -	4]	-
IRC Rapid Xlation Clut	_	1021		- - -	- - - -	- - -	141	_
IRC Rapid	_	1021 1 1	- -	<del>-</del>	_ _ _	- -	141	_
IRC Rapid Xlation Mtr	<u> </u>	1021 1 1	- -	<del>-</del>	- - -	- - -	141	121
7/851/RC Step Motor Clutch	_	1021 1 1	- - -	<del>-</del>	- - -	- - -	141	151
8 85  RC Step Motor Clutch	_	1021 11	- - -	<del>-</del>	- - -	- - -	141	121
8511RC Step Motor Drive	_	1021 1 1	- - -	<del>-</del>	- - -	- - -	141	121
8511RC Step Motor Drive RCCE	<u>-</u>	1021 1 1	- - -	<del>-</del>	- - -	- - -	141	121
851 RC Furn Extrme Trvl	_ 	1021 1 1	- - -	_ _ _	- - -	- - -	141	12
18511RC Furn Ext	_	1021 1 1	- - -	<del>-</del>	- - -	- -	41	121
851 RC Furnace Position	_	1021 1	- -	_ _ _	- - -	- - -	141	121
4/851/RC Furnace Position	_	1021 1	- -	_ _ _	- - -	- - -	141	121
5 851 RC System Bus Relay	_	1021 1 1	- - -	_ _ _	- - -		141	121
851 RC System Bus Relay	_	1021 1	- -	<del>-</del>	- - -	- -	141	121
7/851/RC PCS Utility RCCB	_	1021 1 1	_	-	_ _ _ _	- -	141	121
8/851/RC PCS Utility RCCB On	_	1021 1 1	-	<del>-</del>	<u>-</u> - -	- - -	141	121
18511RC SEM Indexing Jog CW S	_	1021 11	- -	<del>-</del>	<u>-</u> - -	- - -	41	121
851 RC SEM Indexing Jog CCW S	_	1021 1 1	_ _	<del>-</del> -	<u>-</u> - -	- - -	141	121
18511RC Argon Fill Valve RCCB	_	1021 1 1	- -	<del>-</del>	- - -	- - -	41	121
1851 RC Argon Fill	<u>-</u>	1021 11	- -	<del>-</del>	- - -	- - -	41	121
318511RC Argon Fill	_	1021 1 1	- -	<u>-</u> -	- - -	- - -	41	121
18511RC Argon Fill Valve	<u>-</u>	1021 1 1	_ _	<u>-</u>	- - -	- - -	4 ]	121
518511RC IFEA ABS Press 1 RCCB	_	1021 1 1	- -	<del>-</del>	- - -	- - -	141	
18511RC IFEA ABS Press 1 RCCB	_	1021 11	_	- -	<del>-</del> - -	- - -	141	121
511RC IFEA ABS Press 2	_	1021 1 1	<u>-</u> -		- - -	- - -	141	121
1058 851 RC IFEA ABS Press 2 RCCB On	<u>-</u>	1021 1 1	<u>-</u>	<u>-</u> -	<del>-</del> - -	<del>-</del> -	141	121
			-				•	1
<b>–</b> c	- <b>-</b>	_ <	— u		- \ - \	— r — r	<u> </u>	_ (
	₹ C	4. 4. 4.	n c	טי	ء د م د	1	- (	ж Э

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 32 of 38)

	ICIN	I WI NW I SITI	DATA DESCRIPTION	. — ·	,,,,,,,,,,,,,	1/////
ENTIC N	SIM	01 50		VALUE ( == 11)		
<u> </u>	<u>V</u> 0	G. /G   F  S	FIFT		IDI IOI NO.	
I IR . I DESCRIPTION	2 1	<u> </u>			TI DI	1P 1B1
	2 -	×	I   I   I   I   I   I   I   I   I   I	INICIOI		
 	ΞΞ	•	<u> </u>	TIPIF	_ _ _	1D (E)
	-	1024			-	141121
851 RC Vacuum Vent VIV RCCB			 		_	141121
RC Vacuum Vent Viv RC	- ·	1 1 1 1 701			. <u>-</u>	141121
	_	1 1 1701	 			141121
	<u>-</u>	1021   1	- · - ·		 	
Valve RCCB	<u> </u>	1021 1 1	 	 	 	
Valve	_	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	 		
	<u> </u>	1021	 	 	 	
106618511RC Water Inlet Valve Normal	<u>-</u>	021 1 1	- · - ·		 	
106718511RC Water Outlet Vlv RCCB Off	<u> </u>	1021	 		 	
106818511RC Water Outlet Vlv RCCB On	<u>-</u>	1051	- · - ·	 	 	
851 RC Water Outlet Valve	<u>-</u>	1021	  	 	 	
	<u>-</u>	1021 1 1 1	_ ·	 	 	
851	<u>-</u>	1021 1 1	·	 	 	
851 I RC	<u>-</u>	1021 1 1 1	_ _ _ _	 	 	
1851 IRC	<u>-</u>	1021 1 1	_ _ _	  	 	141121
851   RC	_	1021 1 1	_ ·	 	 	
	<u>-</u>	1021 1 1	_ ·		 	141121
851 JRC	<u>-</u>	1021 1 1	_ ·		 	
	<u>-</u>	1021 1 1	_ ·		 	141121
1078 851 RC Ampoule 4 Failure 1 Status	_	1021		 	 	
107918511RC Ampoule 5 Failure 2 Status	<u>-</u>	1021	 			
o51 RC Ampoule 5 Failure 1	_	1021 1 1	  		 	141121
108118511RC Ampoule 6 Failure 2 Status	<u>-</u>	02   1	 	 	 	
1082 851 RC Ampoule 6 Failure 1 Status	_	1021	_ ·	 	 	
1 Failure 2	<u>-</u>	1021	_ ·	 	 	
1851 RC Cartr		1021	_ ·	 	 	
1851 RC Cartr		1021 1 1			 	
1851 RC Cartr	_	1021 1 1 1	_ _ _ _	_ ·	 	
1851   RC Cartr	_	1021 1 1		_ ·		141121
1851 RC Cartr		1021 1 1	- - -	_ !		171161
1	-		-	- - -	- -	_
- 0	- ~	4 4 4		999	1 11	7 8
			1 3 5 7	5 6 7	12 5	0 8
9	ν >	· ·		,	1	

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 33 of 38)

	11131	SIWNINWI	SIT1	DATA	DESCR	DESCRIPTION	MONIC	-	111111111111111111111111111111111111111	/////	. –
C	SE	KIOISOIOSI	01 X I	1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I REQ I A I	_		1 1 1 1	_
NO.10 0	V I O	16.1/61		START! E	END ID	IDATA VALUE		_	CIRCISID	<u> </u>	_
I IR . I DESCRIPTION	9 -	3 :	Œ		1)		EEE		DITOINO.	<u>x</u>	
_ <del>R</del> _	O			MUDIBI IMPIBILIY	1 1 1 1						
	<u> </u>		<u> </u>	<b>-</b> -	 		TIPLE		<u>-</u>	1 E	
		1 60	-	-					-	14112	! =
89 851 RC Cartridge 4 Fallure 2	Status I I	1201			 		- - -	- - - -		=	_
851 RC Cartridge 4 Fallure 1	Status	100	 				- - 	- <del>-</del> - <del>-</del>		14112	_
851 RC Cartridge 5 Failure 2	Status	1001	 	 			- - -		-	14112	_
RC Cartridge 5 Fallure 1	Status I I	1021		 	- 		- - -	· –		_	_
031 AC Calcifuye Viaiture 2	Status	1021	. <u> </u>	_	_ _	_	<del>-</del> -	_ _	-	_	_
8511RC Mech Pulsing Mod RCCB	- -	1021	_	-	<del>-</del>	_	<del>-</del> -	<u>-</u> -	_	_	_
85118C Mech Pulsing Mod	_	1021	_	_	- -	_	- - -	_ _ _	_	_	_
8511RC Peltier Pulsing Drv RCCB	0ff	1021	<u>-</u>	- -	<u> </u>	_	- - -	_	_	_	_ :
8511RC Peltier Pulsing Drv RCCB	0n 1 1	1021	<u>-</u>	- -	- -	_	- -	_ _ _	_		
8511RC Peltier Conn Motor RCCB	off. 1 1	1021	_	-	<u> </u>	_	_ _ _	 			_ :
851)RC Peltier Conn Motor RCCB	uo	1021	<u>-</u>	- -	- -	_	_	_ ·	_	14112	_ ;
851 RC Pelt	_	1021	<u>-</u>	- -	<u>-</u>	_	_ ·	 			_ :
8511	<u>-</u>	1021	<u> </u>	- -	<u> </u>		·		<u> </u>		
18511	ot	1021	<u> </u>	<u> </u>	<u> </u>		 	 	<del>-</del> -		
1851 RC Peltier Conn Re	<u> </u>	1021	_	_ ·		<u> </u>	 	 		21161	
8511RC Cold Guard Mod	<del>-</del> -	1021	_ ·	<u> </u>			 	 		7116	
06 851 RC Cold Guard Mod RCCB On	- ·	1021	<u>-</u> -	 	<u> </u>		 	 			
851 RC Cold Main Prim Mod RCCB	011	1021	 	 	<del>-</del> -		 				
1851 RC Cold Main Prim Mod RCCB	ou o	1701	 	 	 			 			
8511RC Cold Main Red Mod		1701	 		<u> </u>			- - 			
8511RC Cold Main Red Mc	<u> </u>	1021	 	 						-	
1851 RC Hot Boost Mod A RCCB		100	 		 			- - -			5 1
2/851/RC Hot Boost Mod A RCCB		700	 		 		 				-
3 851 RC Hot Boost Mod B RCCB	<u> </u>	1701	<u>-</u> -	 	<b>-</b> -						
1851 RC Hot Boost Mod B RCCB (	_	1071	_ ·	<u> </u>	- ·		<u>-</u> -	 			
1115/851/RC Hot Guard Module RCCB Off	J	1021	- -	_	_		- · - ·			7 7 7	- c
1851 RC Not Guard Module RCCB O	<u>-</u>	1021	_ _ _	_ _	_		- · - ·	 			7 0
11RC HotMain Prim Mod A RCCB	0ff   1	1021	- - -	<u>-</u>	- -	_	_	 			7 6
1851 RC HotMain Prim Mod A RCCB	On 1 1	1021	- -	- -	_	_	- -	- :	- !	141	17
· [ 1   1   5   6   6   7   7   7   7   7   7   7   7			- -		-		-	- -	-	_	
- <	٠, ٣	. 4	4	5	5	2	999	11	7	7	89
	0 6	3 5	9 (	1 3	5		5 6 7	1 2	5	œ	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 34 of 38)

	51		SITI	A DESCRIPTION	IMONICI	(1)11111111111	1//////
NO TO OI		1901081 8	SICHTI	FND LOATA VALUE	-   KEQIA	10100101	! -
	DESCRIPTION   1G	_		111	E E E	IDITO NO.	<u> ×</u>
<u>«</u>	3101	_	Ξ	VD I BT   Y	IVIXICI	17 0	<u>a</u>
- -	, 101	- 18	- #- ix	181	INICIOI	121 EI	11 15
- !	- X -	/		1.51	TIPIF	- - -	13) Q1
1119 851 RC Hot	Main Prim Mod B RCCB Off   1	1021	- - -	-			141121
1120 851 RC Hot	. Main Prim Mod B RCCB On	1021	- - -		- - -	:	141121
	Main Red Mod A RCCB O	1021	_ _ _	 		- - -	141121
_	. Main Red Mod A RCCB On	1021	_ _ _ _	_ _ _	_ _ _	- -	141121
IRC	Main Red Mod B	1021	- - - -	- -	- - -	- -	141121
RC	Main Red M	1051	- - - -	_ _ _	_ _ _ _	- -	141121
RC	Airflow 2	1021	- - - -	_ _ _	_ _ _	- - -	141121
	Airflow 1	1021	- - - -	_ _ _	- - -	_ _ _	141121
RC	Airflow 1	1021	- - -		- - -	- -	141121
RC C	Airflow 1 Stat	1021	- - -	_ _ _	- - -	- -	141121
	Coolant Flow	1021	- - -	_ _ _	_ _ _ _	<u>-</u> -	141121
RC.	Cool	1021	_ _ _ _	_ - -	- - -	<u>-</u> -	141121
RC	oup B Calibration Type	1021	_ _ _ _	<u>-</u>	- - -	<u>-</u> -	141121
-	roup B Calibr	1021	- - - -	<del>-</del>	- - -	<u>-</u>	141121
RC	Guard Heater Ctl Te	1021	- - - -	- -	_ _ _	- - -	141121
RC TC	Group B Calibratio	1021	_ _ _ _	_ _ _	- - -	- - -	141121
<u>R</u>	Main Red Htr Ctl	1051	- - -	_ _ _	<del>-</del> - -	_ _ _	141121
	30	1021	_ _ _	- -	- - -	- -	141121
1851   RC	Main Prim Htr	1021	- - -	<del>-</del> -	- - -	- -	141121
851 I RC	er Hea	1021	- - -	<del>-</del> -	_ _ _	_ _ _	141121
RC C	oup A Calibration	1021	- - - -	<u>-</u> -	<u>-</u> - -	- - -	141121
	Guard Heater Ctl Temp 2	1021	- - - -	<del>-</del> 	- - -	- - -	_
RC TC	oup A Calibration Type	1021	- - - -	<u>-</u>	- - -	- -	141121
Z Z	oup A Calibration	1051	- - -	- -	_ _ _ _	- - -	141121
RC C	Main Prim Htr Ctl 1	1021	- - - -	_ _ _	- - -	- -	141121
RC Co]	Main Red Htr Ctl 7	1021	- - - -	_	- - -	- - -	141121
RC TC	Group C Calibration	1021	- - - -	_ _ _	- - -	- -	141121
114618511RC Hot	Main Red Htr Ctl Te	1021	- - - -	<del>-</del> -	- - -	- -	141121
1851 IRC TC	oup C Calibration Type	1021	- - - -	<del>-</del> -	- - -	_ _ _	141121
1148 851 RC TC	Group C Calibration Type S!	1021	- - - -	<del>-</del> -	- - -	- - -	141121
						-	-
	. (~	- <		ى - كى -	- 4		- r
3 6 7	no	•			o ~		- a
		,	,			7	0

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 35 of 38)

	1010	IMN I NM	ISITI	DATA	DESCI	DATA DESCRIPTION	MON   C	11111111111111	/////	
ENTIC N	SIWI	1501051017		START	END	DATA VALUE	KEQ   A   JE     L	CIRCISID	1D   E	<u> </u>
-	¥101	3				111	E E .	Ξ	×	- A
<del>-</del>	3 0		_	WDIBTIWDIBTIY	DIBT		IVIXICI	IT! D!	<u>a</u>	<u>B</u>
<u>×</u>	-	<u>S</u>		-	_	P.I	INICIOI	-3 -:-	_	=
 	X	. <u>-</u>	10	- -	_	<u>.</u>	TIPIF	- -	۵ :	_ i
		1 000						  -  -	1411	121
3511RC Boos		1001	 				· -	. <u>-</u>	14]	41121
351 RC Hot Guard Heater Ctl T	р 1 	1701	 				 	 	- 4	410121
(C Cold Guard Heater Ctl T	Temp 1	1071	- : - :	<b>-</b> -			 	 	-	41121
Cold Main Prim Htr Ctl	Temp 11	1021	_	- · - ·			 	 	. 4	41124
TC Group D Calibration		1021	·	- ·			 	 	4	41121
C TC Group D Cal	Type Ki	1021	<u> </u>	 			 	 	- 4	121
C Cold Main Red Htr Ctl	mp 2 1 1	1051	- : - :	 			 	 	4	
AC TC Group D Calibration	Type Bl	1021	- ·	 			 	 	1411	1121
AC Sample 2	_	1021	- ·				  	 	4	
2	_	1071	_ ·				 	 	141	1121
RC Sample 4	<u> </u>	1021	<u>-</u> -	<u> </u>			 	 	4	_
RC Sample 3	_	1021	- : - :				 	· - 	-	41121
RC Sample 6	<u>-</u> .	1021	 					 	-	
RC Sample 5		1001	 	 			 	· -	41	
RC Sample 2	<u> </u>	1001	 					· -	-	_
RC Sample 1		1001	 	 			 	. <u>-</u>	-	
RC Sample 4		1701	 				 	_	-	41121
RC Sample 3		1701	 					. – . –	-	41121
RC Sample 6		1701	 				· -	. <del>-</del>	-	41121
8   851   RC Sample 5		1701	 	<del>-</del> -			- - - -	_	-	41121
RC Sample 2		1701	 				· -	_ _	- 4	41121
018511RC Sample 1	<b>-</b> -	1701	 				_		-	41121
8511RC Sample 4		100	 				- - -	-	14	41121
ole 3	<del>-</del> -	1701	 			- <del>-</del>	 	-	- 4	41121
IRC Sample 6	_	1701	 			<u> </u>		· -	-	41121
1851 I RC	<u>-</u>	1021	<u> </u>				 	- <del>-</del>		
5   851   RC	<u>-</u>	1021	·				 	 		41121
8	_	1021	_ ·				 	 		
7718511RC Samp	_	1021	- · - ·					 	-	_
117818511RC Sample 3 Temp 4	<del>-</del> -	1021	- : - -		- !		-   -   -   -   -   -   -   -   -   -			٠,
. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	_ 	_	_		- - -	_	_	-
- <	- W	4	4 4	S	5 5	5	999	1 1		သာ
	· O	<u></u>	5 7 8		3 5	7	5 6 7	1 2	2 2	·
9	,	,	,							

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 36 of 38)

	1010	MNINMIS		DATA	DESCRIPTION	-	//////	111111111111111111111111111111111111111	
ENIC N	SIE	101501051	0	Ι.		I REQ		1 1 1	-
<del>-</del> -	<u>¥</u> 0	16.1/61		P START	END IDATA	IDATA VALUEI ILI	ICIRCISID	ID E	<u>-</u>
I IR . I DESCRIPTION	<u>5</u>	<u>3</u>	L)	-	ITI	E E .	IDITOINO.	۰. د	<u>¥</u>
	3101	<u> </u>		WDBT	BTIWDIBTIY	(VIXICI	ITI DI	<u>-</u>	<u>B</u>
	<u> </u>	<u>-</u>	<del>-</del> ×	<del>*</del>	- <u>P</u>	INICIO	131 E1	=	<u>-</u>
	- K-	<u> </u>	- 101	-		TIPIE	- - -	QI	Ξ
117918511RC Sample 6 Temp 4	_	1021	- -	  -	- - -				
le 5	_	1021	- - -	· –				-	2
le 2	- -	1001		- 	 		 		7
8511RC Sample 1	- -	1021	- - - -		 	  	 		7 5
Sample 4	- -	1021	- - -		 	 		7 5	7 :
8511RC Sample 3	_	1021	- - - -		 	 	 		2 -
8511RC Sample 6	<u>-</u>	1051	_	<del>-</del>	_ _ _	  	- - -	4.1	2
8511RC Sample 5	<u>-</u>	1051	_	- -	<u>-</u> -	- - - -	- - -	- 4	2
8511RC Sample 2	<u>-</u>	1021	<u>-</u> -	- -	<u>-</u> -	_ _ _	- - -	141	15
SollRC Sample 1	<u>-</u>	1021	<u>-</u> -	_	- -	_ _ _	_	141	121
851 RC Sample 4	_	1021	<u>-</u>	_	<del>-</del> -	_ _ _	- - -	141	- 2
851 RC Sample 3	<u>-</u>	1021	_ _ _	- -	<u>-</u> -	_	- - -	141	7
1851   RC Sample 5	_	1021	_ _ _	_ _	<u>-</u>	- <del>-</del>	- - -	141	2 2
8511RC Sample 6 Temp 6	<u>-</u>	1021	- -	-	<u>-</u> -	_ _ _	- - -	141	12
318511RC IFEA Water Inlet 1	<u>-</u>	1021	_ _ _	<u>-</u>	- - -		_	141	7
851/RC IFEA Water Outlet I	_	1021	_ _ _	_	- - -	_ _ _	<del>-</del> -	41	121
8511RC RFM Hot End Shell	<u>-</u>	1021	- -	<u>-</u>	- - -		_ _	141	5
BSIIRC RFM Cold End Shell	<u>-</u>	1021	_ _	- -	_ _ _	- - -	- -	141	121
851/RC Hot Zone CJ Block	_ _	1021	_ _ _	<del>-</del>	<u>-</u> -	_ _ _	<u>-</u>	41	12 6
851/RC Hot Zone CJ Block T	<u>-</u>	1051	<u>-</u> -	<u> </u>	- - -		- -	141	121
IRC Cold Zone CJ Block	<u> </u>	1021	<u>-</u> -	<u>-</u>	- - -	_ _ _	- - -	[4]	121
8511RC Cold Zone CJ Block	<u>-</u> .	1021	<u>-</u> :	_	_ _ _	<del>-</del> - -	- - -	4	121
INC SAMPARE I CO BIOCK	 	1701	<u> </u>	- ·	_ ·	_ _ _	<u>-</u> - -	141	121
IPC Sample 2 C		170	 		_ ·	_ _ _	- -	141	2
Inc compic 2 co block		1701	- · - ·	<u> </u>	_ ·	<u>-</u>	_ _	4	121
Inc sample 1 to Block	_ : _ :	1701	_ ·	_	<u> </u>	<u>-</u> - -	- - -	141	121
IRC sample 3 CO Block	<u>-</u>	1051	_	_	<u>-</u> -	_ _ _	- -	141	121
IRC Sample 2 CJ Block	<u>-</u>	1051	- -	_ _	_ _ _	<del>-</del> - -	- - -	41	121
8511RC Sample 4 CJ Block Tem	<u>-</u>	1051	_ _ _	_	- - -	_ _ _	<u> </u>	141	5
208 851 RC Sample 3 CJ Block Temp 2	<u>-</u>	1021	- - -	<u>-</u>	<del>-</del> -	<del>-</del> -	- - -	141	151
1			-	-	-			-	: -
		- 9		ى - ص	- u		- r		_ (
3 67	· c	- v		) -	ים ה ה	0 -		- (	<b>x</b> 0 (
	>	ר ר	0	· -	- C	7 00 0	2 2	20	c

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 37 of 38)

	1010	IMNINMISITI	DATA DE	DESCRIPTION	I MON I C I	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11111111
	SWI	01 501		1 6		010000	
10	<u>v 101</u>	16.1/61 [P]	P START  END	IDATA	VALUE     L.     E   E   .	ICINCISID	<u> </u>
IR . DESCRIPTION	2	=		TIXI		T D	_
	=======================================		-	I B I	INICIO		_
 	<u>×</u>			<u>-</u>	TIPIF		1D 1E1
	-	1021 1 1			- - -	-       	141121
631 RC Sample 3 CO BIOCK		1021	_	- -	- - -	<u>-</u> -	141121
parting sample 5 Cl Block	. <u>–</u>	1021 1 1	- -	<u>-</u>	<u>-</u> - -	<u>-</u> - -	
11RC Sample 5 CJ Block	. <del>-</del>	1021 111	- - -	<u>-</u>	- - -	_ ·	41 2
1851 RC Ampoule Alignment	<u>-</u>	1021 1 1 1	- - -	<u>-</u>	_ ·	- · - ·	
1851 IRC	<u>-</u>	1021 1 1 1	  	<u> </u>	  	 	141124
8511RC	<u>-</u>	1021 1 1	 	<u> </u>	 	 	121141
851 RC SEM Track Temp	_	1021 1 1	 	·	  	 	
511RC IFEA Upper Atmosphere	 	1021	 	 	  	 	
851 RC IFEA Lower Atmosphere Te		1 1 701			 	 	
851 RC RTD Mux 1 Calibration =	 	1021	 		 	- - -	_
851 RC RTD Mux 1	 	1021			- - - - -	- - -	
851 RC RTD MUX 2 CALIDIACION -	 	1001	· -	- -	- - -	- -	141121
851   RC RTD Mux 2 Calibration -	 	1021	 	. — . —	_ _ _	- - -	141   21
8511RC RID Mux 3 Calibration -	- - -	1021	- -	<u>-</u>	<del>-</del> - -	- - -	_
85118C RTD Mux 4 Calibration -	_ _	1021 1 1	<u> </u>	<del>-</del>	- - -	_ _ _	_
8511RC RTD Mux 4 Calibration -	_ _	1021 1 1	- - -	<del>-</del>	_ ·	 	
8511RC RTD Mux 5 Calibration -	<u>-</u>	1021 1 1	<u>-</u> -	<u>-</u>	_ ·	- · - ·	
851 JRC	_ _ _	1021 1 1	- ·	 		 	14112
9 851 RC RTD Mux 6 Calibration -	<u> </u>	1021	 	 	 	 	
30 851 RC RTD Mux 6 Calibration -	_ · _ ·	1021	 	<u> </u>	 	 	
31 851 RC RTD Mux 7 Calibration -	_	1 1 1701	 	<b>-</b> -	 	 	-
32 SELLIRC RTD Mux 7 Calibration -	  _	1021		 		 	
33 551 RC RTD Mux 8 Calibration -	_ ·	1071			 	 	14112
123418511RC RTD Mux 8 Calibration - High	_ _ _	1021	- · - ·	<u> </u>		 	14112
35/851/RC Cold Guard Heater	_	1021			 	<del>-</del> -	2117
6 85  RC Cold Guard Heater Voltage	<u>-</u>	1021	- · - ·	<u> </u>	<u> </u>	 	7117
37/851/RC Cold Main Primary Heater	_ _	1021	- · - ·		 	<b>-</b> -	14112
38 851 RC Cold Main Primary Heater	Volti	1021		- !	- I	- ! ! ! ! ! ! ! !	7176
1   1   1   7   7   1   1   1   1   1	- - -	-	_ 	_ _	<del>-</del>	<del>-</del>	_
<del>-</del> C	3.4	4 4 4 4	5 S	5 5	999		7 8
3 6 7	0 6	3 5 7 8	1 3		261	1 2 5	o 80

TABLE 2.7-2. SIGNAL INTERFACE DEFINITION EXPANSION (Sheet 38 of 38)

	1010	IMNINMISIT		DATA	DESC	DESCRIPTION	I MON I C I	minimini,	1111	1///
ENTICAL	χ Σ	Isolosioly			1 000	CORDS DND 10898 WALLS I	- I KEQ! A I	01010010	; -	1 -
2 4	<u>v</u> <u>v</u>	5 3	<u>.</u>	3.1AK1.	END	DAIA VALUI Ti	17117		2 2	- 4
	IOE	= =		-	DIBT	- <del>-</del> -	X   X   X   X   X   X   X   X   X   X	ITI DI		
	1.	<u>s</u>	_	<b>=</b>	_	- B-I	INICIOI	3   E	Ξ	<u>-</u>
	ΪΚ	<u>-</u>		- -	_	E	ITIPIFI	- - -	≘	Ε.
1239 851 RC Cold Main Red Heater Current	  -  -	1021	-	  -		- -	- - -		4	1121
1240 851 RC Cold Main Red Heater Voltage	<u>-</u>	1021	<u> </u>	_	<del>-</del>	_	- - -	- - -	-	112
1851   RC Hot	<u>-</u>	1051	_ _	- -	<u>-</u>	_	- - -	- - -	-	_
124218511RC Hot Boost Heater Voltage	<u>-</u>	1021	_ _ _	- -	_	_	- - -	- - -	_	41121
1851	<u>-</u>	1021	_ _ _	- -	_	_	- - -	- - -	-	41   2
4   851	_	1021	<u>-</u> -	- -	<u>-</u>	_	<del>-</del> - -	- - -	-	41121
851 RC Hot Main Primary	<u>-</u>	1021	- -	<u> </u>	<u>-</u>	_	<del>-</del> - -	- -	-	_
61851 RC Hot Main	_	1051	- -	_	_	_	- - -	- -	-	_
7 851 RC Hot Main Red Heater	<u>-</u>	1021	<del>-</del> -	<u> </u>	<del>-</del>	_	- - -	- - -	7	_
851 RC Hot Main Red Heater V	_	1021	<del>-</del> -	_	_	_	- - -	- - -	-	_
IRC Stepping Motor	_	1021	<del>-</del> -	_	_	_	- - -	- -	-	41121
1851 RC Stepping Motor Phase A	_	1021	- - -	- -	<u> </u>	_	- - -	- - -	-	_
1851 RC Stepping Motor Phase B	_	1021	_ _ _	·_	<u>-</u>	_	- - -	- - -	-	41121
	<u>-</u>	1021	- - -	<u>-</u>	- -	_	- - -	- - -	7	41121
8511RC Index	<u>-</u>	1021	<u> </u>	<u>-</u>	_	· -	- - -	- - -	-	41121
RC Furna	_	1021	- -	<u>-</u>	<u>-</u>	_	<u> </u>	- - -	<u>-</u>	11121
1851 RC IFEA I	<u>-</u>	1021	_	- -	_	-	_ _ _	- - -	-	41   2
	<u>-</u>	1021	- - -	_	<u>-</u>	_	- - -	- - -	-	41121
851 RC IFEA Absolu	<u>-</u>	1051	<u> </u>	_	<u> </u>	-	- - -	- - -	4	-
18511RC IFEA Upper Humidity	<u>-</u>	1021	_	- -	_ _	_	- - -	- - -	<del>-</del>	
1851 IRC Exper	_	1021	- -	_	<u>-</u>	_	- - -	- - -	-	41121
851 RC IFEA	_	1021	<u>-</u>	_	<u> </u>		- - -	- - -	-	_
1851 IRC SMS B	<u>-</u>	1021	<del>-</del> -	_ _	<u>-</u>	_	- - -	- - -	-	41121
8511RC Exper	<u>-</u>	1021	<del>-</del>	_	<u>-</u>	_	<u>-</u> - -	- - -	-	41121
851 Process	<u>-</u>	1021	- -	- -	<u> </u>	_	<u>-</u> - -	- - -	<del>-</del>	
1851 160/1	<u>-</u>	1021	<u>-</u>	- -	<del>-</del>	_	- - -	- - -	<del>-</del>	41121
65 851 CGF Sytstem St	<u>-</u>	1021	- -	-	<u> </u>	_	- - -	- - -	-	41121
266 851 Auto Pressure Ctl	<u>-</u>	1021	- -	- -	_	_	_ _ _ _	- - -	-	41121
	-	-	-			-			-	-
C	3	4	4	5	٠.	. 50	9 9 9	1 11	١	- cc
3 67	0 6	3 5	7 8	7	5	7	5 6 7	1 2 5	<b>œ</b>	0

TABLE 2.7-3. EVENT/EXCEPTION MONITOR REQUIREMENTS

HESSAGE   ERRORI   MESSAGE   ERRORIT MITUIJPI    E	NIC NIEMRI	MONITOR	MONITOR VALUES   M	Ξ.	[	1////1	; ; ; ; ; ; ; ; ; ; ;	I   / / / /	T T 10C1///	<b>-</b> 7	1////1
128	COAL CNTI CNTI CIE IO I	1	<del>-</del>		MESSAGE IIGH/SINGLE)	ERROR     MSG.	MESSAGE LOW	MSG.       MSG.	· ·	==	
128   1300   101   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105   105	1 4		1001	11111	MATER TEMP	1411141		1411	300110106	3F	141141
-0771 -128 1     HUMIDITY UPR	001	-0/31	-128	11 HI	HUMIDITY LWI	31411161		1411	300 10 CC	] E	141141
-004 -128 1    ATMOS TEMP   41	100	1770-	-128	11 HI	HUMIDITY UP	8 41 18		1411	3001101CC	- N	41141
-073  -128 1    H CLD END TEMP[41	1001	1 -0041	-128	H	ATMOS TEMP	41   1A		141	3001101M	N.	141141
-073   HI TEA PRES 1	1001	1 -073	-128	1   HI	CLD END TEM	F141.1C1		- -	300   10   M	AN	141141
-009  -073	1001	1 -0731	8ZI-	TH I	TEEN DOES 1	141120110	IFEA	1411211	300 10 C	3F.I	141141
+105  -128 1     MAIN CURRENT    41   41	1001	1600-	-073	1 H H I	IFEA PRES 2	41 22 10	IFEA	[41]23]	3001101C	GF	14114
+076 +018		1500-	-128	IHI I		T 41 24		411	300 10 C	GFI	141141
	001	1920+	+018	11 HI		E141126110		E   41   27	30011010	GF.	4114
	1001	_	-	97 :	WATER FLOW	141 281		141	30010510	GF.	141141
	1001	_	_	0111	WATER FLOW	14112A1		141	30010510	GFI	141141
	1001	_		ON I	AVIONICS AI			411	30010051	GFI	141141
	1001	_		ONIT	AVIONICS AI			1411	30010081	GFI	141141
	1001	_		ON IT	AVIONICS AI			141	130010081	GF1	141141
	1001	_			SALCALLE BYDASS			1411	1300100E1	IAN	141141
	1001			1 M   T   1	A COLL BYPASS	4		1411	1300100E1	IAN	141141
	1001	_		£3-1-	. 2	141		1411	130010081	IAN I	141141
	1001	_		1 M T 1 M T	SCALL NI A	14113A1		1411	130010051	IAN	141141
	5 001	_	- ·	1 M I T	TIME TANGET			1411	1300100F1	LSI	141141
OllEXTRM INVL LIM   411   1300 05 CGF	1001	_	_	1 1 1 2	TERM INVENTE			1411	43001051F	TSI	141141
	10019	_	_		TIKM TRVL LIF	1411351		1411	13001051	GF	141141
	1001	_	_	01115	(P BUS PWR OF	10411401		101	130010510	SFI	41 4
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1001	-	_	1 1 1 EX	BUS PWR	F1411421	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
0 1 222 3 56 . 2 4 7 9 2 90	-		1 1 1 1 1 1 1			- - -		_ `	- \ - \	<u>-</u> ر	— r
3 56 . 2 4 1 9 2 9 9	- c	. <del>, -</del>		2 2 2		4 4 4		9	ه ه ه ه	- (	• 0
	، ر -	• [	. •	1 7 1		3 5 6		2 4	7 9	7	υ, O

			i
N   N   N   N   N   N   N   N   N   N		-	<u> </u>
N	-	_	
PC   +0000000+00  PC   +00000000+00    PC   +00000000000+00  PC   +00000000000+00  PC   +000000000000  PC   +00000000000000  PC   +000000000000000  PC   +00000000000000000000000000000000000	A3 - A4	- <b>A</b> 5	<u> </u>
PCI+0000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0			<b>-</b> -
PCI+0000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+00000000+001 PCI+0000000+001 PCI+0000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+000000000+001 PCI+000000000+001 PCI+000000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+0000000			 
PCI+0000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+00000000+001 PCI+0000000+001 PCI+00000000+001 PCI+0000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PC		*	
			_
\$0   PC   +0000000+00   +1000000+01   50   PC   +0000000+00   +10000000+01   50   PC   +0000000+00   +10000000+01   50   PC   +00000000+00   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +1000000000+01   +10000000000			
\$0   PC   +0000000+00   +1000000+01   5			
\$0   PC   +0000000+00   +1000000+01   50   PC   +00000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   100000000+01   1000000000+01   1000000000+01   10000000000			
\$0   PC   +0000000+00   +1000000+01   50   PC   +00000000+00   +10000000+01   50   PC   +00000000+00   +10000000+01   50   PC   +00000000+00   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +100000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +100000000+01   +10000000+01   +100000000+01   +10000000+01   +100000000+01   +100000000+01   +100000000+01   +10000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +1000000000+01   +1000000000+01   +1000000000+01   +1000000000+01   +10000000000			9112
50   PC   +00000000+00   +1000000+01   50   PC   +00000000+01   1000000+01   50   PC   +00000000+00   +10000000+01   50   PC   +000000000+00   +10000000+01   50   PC   +00000000+00   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +100000000+01   +100000000+01   +10000000+01   +10000000+01   +10000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +100000000+01   +10000000000			
PCI+0000000+00I PCI+00000000+00I PCI+00000000+00I PCI+00000000+00I PCI+00000000+00I PCI+00000000+00I PCI+00000000+00I PCI+00000000+00I PCI+00000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I PCI+0000000+00I			
PCI+0000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+00000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001 PCI+0000000+001			9110
PCI+0000000+00  PCI+0000000+00  PCI+0000000+00  PCI+00000000+00  PCI+0000000+00   PCI+0000000+00  PCI+0000000+00  PCI+00000000+00  PCI+00000000+00  PCI+0000000+00  PCI+0000000+00  PCI+00000000+00  PCI+0000000+00    PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+00000000+00  PCI+	- —		
PC   +0000000+00  PC   +00000000+00  C   +00000000+00	-		
PC   +0000000+001 PC   +00000000+001 PC   +00000000+001 PC   +0000000+001 PC   +0000000+001	-	_	-
	_	_	_
		_	14116
			141161
			9 1 6
			41.6
			9-17-1
	_	_	9 1 1 9
\$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01	_	_	41.6
\$01PC1+0000000+001+1000000+011 \$01PC1+00000000+001+1000000+011 \$01PC1+00000000+001+10000000+011 \$01PC1+00000000+001+10000000+011 \$01PC1+00000000+001+10000000+011 \$01PC1+0000000+001+1000000+011 \$01PC1+0000000+001+1000000+011 \$01PC1+0000000+001+1000000+011 \$01PC1+0000000+001+1000000+011 \$01PC1+0000000+001+1000000+011	_	_	14116
		_	
\$0 PC +0000000+00 +1000000+01  \$0 PC +00000000+00 +1000000+01  \$0 PC +0000000+00 +1000000+01	_	_	-
SOIPC +00000004001+10000000+011 SOIPC +0000000+001+10000000+011 SOIPC +00000000+001+10000000+011 SOIPC +0000000+001+10000000+011 SOIPC +0000000+001+10000000+011 SOIPC +0000000+001+1000000+011 	-	_	_
501 PC   +0000000400   +10000000+01	_	_	14116
501PC1+00000004001+1000000+011 501PC1+0000000+001+10000000+011 501PC1+0000000+001+1000000+011 501PC1+0000000+001+1000000+011 1	_	_	14116
50 PC +0000000+00 +1000000+01  50 PC +0000000+00 +1000000+01  50 PC +0000000+00 +1000000+01	_	_	141161
501PC1+0000000+001+1000000+011	_	_	141161
		_	141161
	_	_	141161
0 0			
, , , , , , , , , , , , , , , , , , ,	9 9	,	7 8
5 7 8 9 0	,	. ~	. 0

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 2 of 20)

	B	B	A 2	2	¥	<b>A</b> 5		P P D P P P P P P P P P P P P P P P P P
11641850 PC 1+0 11651850 PC 1+0 11651850 PC 1+0 11651850 PC 1+0 11651850 PC 1+0 11651850 PC 1+0 11691850 PC 1+0 11701850 PC 1+0 11701850 PC 1+0	100+000000	+1000000+011 +10000000+011 +10000000+011 +10000000+011 +10000000+011 +10000000+011 +10000000+011 +10000000+011 +10000000+011						
1164   850   PC   +0 1165   850   PC   +0 1166   850   PC   +0 1167   850   PC   +0 1169   850   PC   +0 1170   850   PC   +0 1171   850   PC   +0 1171   850   PC   +0	100+000000	+1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011						1 <b></b>
		10000000+01  10000000+01  10000000+01  10000000+01  10000000+01  10000000+01  1000000+01  1000000+01  10000000+01						<b></b>
	100+000000 100+0000000 100+0000000 100+0000000 100+0000000 100+0000000	+1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011 +1000000+011						
	100+000000	+1000000+01  +10000000+01  +10000000+01  +10000000+01  +10000000+01			·			- <b></b>
	100+000000 100+000000 100+000000 100+000000	+ 1000000+01  + 1000000+01  + 1000000+01  + 1000000+01						
1172 (850 (PC) +0	100+000000	11000000+011						
	+ f 00 + 0000uuu	+1000000+01	_		_		-	-
174   850   PC   +0			-					
	100+000000	8501PC1+0000000+001+1000000+011						41   6
1177   850   PC   +0	100+000000	850 PC +0000000+00 +1000000+01	_	-	-		_	_
	100+000000	850 PC +0000000+00 +1000000+01		_	-			41   6
1180;850;PC;+0	+100+000000	850 PC1+0000000+001+10000000+011 850 PC1+000000+001+1000000+011					_	
	100+000000	850 PC +0000000+1000000+01						41 6
118318501PC1+0	100+000000	8501PC1+0000000+001+10000000+011	_	_ ,	_		_	_
185   850   PC   +0	100+000000	850 PC +0000000+00 +1000000+01  850 PC +0000000+00 +1000000+01						41 6
	100+000000	8501PC1+0000000+001+1000000+011	-	-	-		· –	
188   850   PC   +0	# 20   PC   +0000000+000 +000   +	850 PC +0000000+00 +1000000+01		<del>-</del> .	_		_	_
		+1000000+011					 	4116
		+1000000+011						4 1 6
_	+100+000000	850 PC +0000000+00 +1000000+01	· <del>-</del>	-				
193  850  PC  +0    194  850  PC  +0	* 1 00 + 00 00 00	850[PC[+0000000+00]+1000000+01] 850[PC]+0000000+00]+1000000+01]					_	
-	+100+000000	+0000000+000+01000000+011						41.6
-	-	-	-			-	- !	- 1
0 0 0		2	₹	· vs	. 49		_	- 69
3 5 7	œ	6	0		2	3	_	0

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 3 of 20)

U W W I	0 AY   LP   IE					•		X IX
<u>~</u>	<u> </u>	04	A1	A2	 2	·	<b>A</b> 5	
	 	- <b></b>						
1961850	DIPCI+	850   PC   +0000000+00	850 PC   +0000000+00   +5000000-01					==
198   85(	O PC +	100+00000000	19818501PC1+0000000+001+5000000-011	· <del></del> ·				==
1991850 2001850	0   PC   +	100+00000000	199 850 PC +0000000+00 +5000000-01  200 850 PC +0000000+00 +5000000-01	<b>-</b>				=
2011850	0 PCI+	100+0000000	850   PC   +0000000+00   +5000000-01					141
202185022031850	850 [PC] + 850 [PC] +	100+00000000		_		-		=
	2	100+0000000+	+0000000+001+5000000-011					===
206   850	2 2	100+0000000	+0000000+000+000000+		- <b>-</b>	. =		Ξ
	PCI	100+00000004	+0000000+001+5000000-011					<del>-</del> <del>-</del>
20918501	2 5	000000000000000000000000000000000000000	PC   +0000000+00   +3000000-01		-	-		Ξ
21018501	OIPCL	100+0000000+	PC   +0000000+00   +5000000-01					===
211   85	O PCL	00+00000000	211 850 PC +0000000+00 +5000000-01  212 850 PC +0000000+00 +3663000-01		- <del>-</del>	_		=======================================
213 85	0 PC L	00+0000000+	850   PC   +0000000+00   +9768000-02					==
214   85	OPCIO	00+0000000+	850   PC   +0000000+00   +2442000-01  850   BC   +0000000+001+2442000-01					1416
	PCIT	00+0000000+	850   PC   +0000000+00,   +7326000-02					14116
217   85	850   PC   4	+0000000+00 -2419000+03	850   PC  +0000000+00  +7325000-02  850   PC  -2419000+03  +2325500+01	+00000000+00 +/32&000-02  -2419000+03 +2325500+01 +9104500-03	+2442500-061		- <b>-</b>	14116
	בוב	-2419000+03	1+2325500+01	-2419000+03 +2325500+01 +9104500-03 +2442500-06	+2442500-06		_	14116
220185	PC	-2414600+03		+2297900+001+1211300-041	1-4356500-091			
221   85	OIPCI	850   PC   -2414600+03		+229/900+00 +1211300-04 -4336300-09  +2297900+001+1211300-04 -4356500-09	+1211300-04 -4336300-09			=======================================
223185	OPCI	-2414600+03	1+2297900+00	850 PC -24 4600+03 +223/500+00 +1211300-04	-4356500-091		· <del>_</del>	141
224   85	Olbel	-2414600+03	850   PC   -2414600+031+2297900+001	1+1211300-041	-4356500-091	,	-	
225185	OIPCI	+1493200+02	1+1381000+03	850 PC +1493200+02 +1381000+03 -8505200+01 +9220100+00 -5706400-01 +1394/00-02 850 PC +1493200+02 +1381000+03 -8505200+01 +9220100+00 -5706400-01 +1394700-02	+9220100+00   +9220100+00	-5706400-01	-5706400-01 +1394700-02 -5706400-01 +1394700-02	<del>-</del> <del>-</del>
!!	-	-			-	-		_
- 0	- c		. ~	. 🕶	·sn	9	7	_
, . ,	> r	• •		c	_	7	Cr.	0

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 4 of 20)

CALIBRATION COEFFICIENTS/LINEAR SECHENTS    A1	A2
10N COEFFICIENTS/LINEAR SEGMENTS  10N COEFFICIENTS/LINEAR SEGMENTS  A2	ILEP    NO   NO   NO   NO   NO   NO   NO
10N COEFFICIENTS/LINEAR SEGMENTS  10N COEFFICIENTS/LINEAR SEGMENTS  A2	ILEP    NO   NO   NO   NO   NO   NO   NO
7 !	LP
7 !	LP
7 !	LP
200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+138 (200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270 (2200+021+270	1
	1   1   1   1   1   1   1   1   1   1

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 5 of 20)

	N 5	+1394700-02
SEGMENTS	¥	381000+031-8505200+011+9220100+001-5706400-011+1394700-02 3810000+031-8505200+011+9220100+001-5706400-011+1394700-02 3810000+031-8505200+011+9220100+001-5706400-011+1394700-02 3810000-021 384000-021 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100-001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001 384100+001
CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	¥3	+9220100+001 +9220100+001 +9220100+001 -4356500-091 -4356500-091 -4356500-091 -4356500-091 -4356500-091
ON COEFFICE	V 2	-8505200+01 +9220100+00 -8505200+01 +9220100+00 -8505200+01 +9220100+00 -1211300-04 -4356500-09 +1211300-04 -4356500-09
CALIBRAT	IV	~-~
	04	850   PC   +1493200+02   +1381000+03   -8505200+01   +9220100+00   -5706400-01   +1394700-02 850   PC   +1493200+02   +1381000+03   -8505200+01   +9220100+00   -5706400-01   +1394700-02 850   PC   +1493200+02   +1381000-02   -5706400-01   +1394700-02 850   PC   +00000000+00   +1743900-02   -5706400-01   +1394700-02 850   PC   +00000000+00   +1743900-02   -5706400-01   +1394700-02 850   PC   +00000000+00   +1743900-02   -5706400-01   +1394700-02   -5706400-01   +1394700-02   -5706400-01   +1394700-02   -5706400-01   +1394700-02   -5706400-01   +1394700-02   -5706400-01   +1394700-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02   -5706400-02
N 0 K K	<u> </u>	8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   R 8 8 0   PC   PC   R 8 8 0   PC   PC   R 8 8 0   PC   PC   R 8 8 0   PC   PC   R 8 8 0   PC   PC   PC   PC   PC   PC   PC
N N E R	<u>~</u>	258     259     259     250       250       250       250       250       250       250       250       250       270       270       270       270       270       270       270       270       270       270         270         270         270

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 6 of 20)

B		,	CALIBRA	TION COEFFICE	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	EGMENTS			E II
		V Q	¥	¥2	£	A4	\$ <b>&amp;</b>		
. 1	289   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   299   850   PC   300   850   PC   300   850   PC   300   850   PC   300   850   PC   300   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311   850   PC   311		1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+2297900+00 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+1000000+01 1+2997900+00 1+2442000+00	+1211300-04   +1211300-04   +1211300-04   +1211300-04   +1211300-04   +1211300-04   +1211300-04   +1211300-04   +1211300-04   +1211300-04	-4356500-09  -4356500-09  -4356500-09  -4356500-09  -4356500-09  -4356500-09  -4356500-09				41   6   1   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6   1   6
	0 0 0	30	1 2 2 9	-40	- 5 5	9	; ! ! ! !	- L	8 6

T MIR (LP	0 AY    LP	CALIBRAT	ION COEFFICE	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS		T 3
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
<u> </u>							
-	1 A0	A1	<b>A</b> 2	- ¥3	A4 .	A5	<u>-</u>
_ :	_						 
<u> </u>		_					 
						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	_	+24					141
		+2442000-011					
3221850   PC  323   850   BC	1 + 0 9 1 0 0 0 0 + 0 7 1	12.4					
323   830   FC   324   850   PC							=======================================
325   850   PC	11+9760000+031	+2442000+001			_		=
326   850   PC	326   850   PC   +9760000+031	1+2442000+001		_	_		<u>-</u>
327   850   PC	160+0000916+12				_		=======================================
328   850   PC	850   PC   +9760000+03	+2442000+001			_		
32918501PC	329 850 PC +68 0000+02 +2442000-01	1+2442000-011					
3301830185 33118501PF	830   FC   +881 0000 +02   +2442 000 -01 850   PC   +0000000 +00   +1000000+01	1+1000000+011					
332   850   PC	850   PC   +0000000+00   +3125000+00	1+3125000+001			_		- 41
3331850 PC	100+0000000+12	+0000000+001+5200000+001		_	_		141
334   8 50   P		1+1000000+011					===
335   850   PC		100+000042+100+000000+					
	100+0000000+12	+00000001+100000000+011					-
-	850   PC   +0000000+00   +3125000+00	1+3125000+001		_			141
339   850   PC	100+0000000+10	+0000000+001+2500000+001		_	_	_	141
	100+0000000+10	+0000000+001+10000000+011		_	_	_	=======================================
-		+0000000+001+3122000+001		_	_	_	-41
		+0000000+001+2500000+001					= =
0000		+0000000+001+100+00+00+0+0+1					
344   850   P	PC +0000000+00	110+0000001+100+000000+					
200	FC  +000000+001 +1000000+0101	1+1000000+01					4
850	PCI+000000+001+1000000+01	1+1000000+011					-
950	PC  +0000000+00  +1000000+01	1+1000000+011		_	_	_	141
	850 [PC] +0000000+00] +1000000+01	1+1000000111			_	_	41
350   850   P	PC +0000000+000	+0000000+001+1000000+011			_	_	4]
	-	_	-	-	-	-	-
0	-	2	•	5	9	7	7

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 8 of 20)

N UIO OLAYI T MIN ILPI R BIR IIEI	CALIBRATI	ON COEFFICE	CALIBRATION COEFFICIENTS/LINEAR SEGRENTS	SEGMEN 1 3	1	   	E T X
<u> </u>	ī	N2	£	<b>4</b>	A & & & & & & & & & & & & & & & & & & &		
IN	0 +1000000+01						14116
850 PC	+0000000+00 +1000000+01 +1000000+01					- <b></b>	
358 850 PC +4000000400 +1000005+34 360 850 PC +0000000400 +1000000+01	01+1000000+01		· <b></b>				
850 PC	+0000000+001+1000000+011				<b></b> -		4116
850 PC  850 PC	01+1000000+011						
366 850 PC +0000000+00 +1000000+01 369 850 PC +0000000+00 +1000000+01 320 850 PC +0000000+00 +1000000+01	101+1000000+011 101+10000000+011						14116
371 850 PC +0000000+00 +1000000+01	00   +1000000+01						41 6
373 850 PC +0000000+00 +1000000+01 374 850 PC +0000000+00 +1000000+01	)0 +1000000+01  )0 +1000000+01				<b>-</b> -	. <b></b>	141
	PC +0000000+00 +1000000+01  PC +0000000+00		. <del></del>				4 4 4
850   PC   850   PC	+0000000+00+1000000+011000000+0110000000				. <b></b>		4 4
850 PC  850 PC	+0000000+100+100000+ +0000000+001+1000000+011+1000000+011+100000+011+1000000		. <b>.</b>		<b></b>	<del>-</del> -	<u> 4</u>
387 850 PC +000000+00 +100000+00  387 850 PC +0000000+00 +1000000+00  389 850 PC +0000000+00 +1000000+01  399 850 PC +0000000+00 +1000000+01  390 850 PC +0000000+00 +1000000+01	001+1000000+01 001+10000000+01 001+10000000+01						14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
	- <		- «	- 0			- ~
0 0 0	7 6	, 0	. –	2		~	6

No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.	NIC NICT		CALIBRAT	ION COEFFIC	CALIBRATION COEFICIENTS/LINEAR	SEGMENTS			<pre></pre>
A3 A4 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5 A5	<u>-</u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !					
	_ E	ν0	IV -	A2	<b>V</b> 3	٧	- <b>y</b> 2		
vo	 - 0								
	- 2								 
- v	0   PC   +0	00+0000000	1+1000000+011					-	141161
	O   PC   +0	00+0000000	1+1000000+011						9 1 7
	O I BC I +0	00+0000000	1+1000000+011		-				
	0 PC +6	00+000000	1+1000000+01		_	_	_	-	141161
		00+000000	1+1000000+011					_	_
	2 2	00+000000	1+1000000+01						
	PC	00+000000	1+1000000+011						
	2	00+000000	1+1000000+011						4116
	PC	00+0000000	1+1000000+011						43.64
	PC	000000000	1+1000000+011	_			_		141161
	PC	00+000000	1+1000000+011		_	_	_	_	_
	2 2	00+0000000	1+1000000+011					-	_
	2	00+000000	1+1000000+011	- <del>-</del>					
	0   PC   +0	00+000000	+1000000+011	_					14116
	0   PC   +0	100+0000000	1+1000000001+1			-			
	0   PC   +0	100+0000000	1+1000000+011	_	_				
	0   PC   +0	100+0000001	1+1000000+011		_	_	. <b>_</b>	-	_
	0   PC   +0	100+0000000	1+10000001+1	_		_	_	_	-
	0   PC   +0	100+000000		_		_	_	-	141161
	0170140	1004000000		_		_	_	-	141161
							_	-	_
	5 6	00.00000	1100000011	-		_	_	-	_
	ב כ	100+000000	+1000000+011				_	_	_
141    141    141    141    141    141    141    141	2	00+00000	100000011				_	_	_
4 4 4 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	00.00000	1100000011			_	_	_	-
4 4 4 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	010010	000000	+1000000+011	_		_		_	_
	0   PC   +0	100+0000000	+1000000+011						
	0   PC   +0	100+000000	+1000000+011	_					91.6
- <b>v</b> (	-			-		-		-   -	- 1
	. 0	_	- 0	- 4	- 4	- 7			_ ·
	, ,	· α	4 0	<b>,</b>	n -	•		. ,	-

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 10 of 20)

E NIC NICT	CALIBBA	CALINDATION COFFEIGIFNTS/LINEAD SECUENTS	ENTS /1 INEAD	o Engano			///
× ×		211122 101	LINI ST LINEAR	SECREM 13			E 17
R BIR   IE						-	×
		 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-		<u>a</u> :
-							1 1 1
I IT I AO	- W1	A2	<b>A</b> 3	A4	A P	_	
- 11	_	_		: -	-		
101 - 1	_	_		_			-
- x- 	_	-		_	_	-	_
405-0000000-1-0000000-1-0000000-1-00000000				1111111111		1 .	1 .
423   830   PC   +0000000+00	10+0000001+100				_	-	41   6
1428185018C1+0000000+	110+9000001+100+000000+	-				-	41
	110+0000001+100	_				_	- 41
	FC   +000000 +00   +1000000 +01						41
	10000001+100	-					- 14
	110-0000001-100	-					16.
435  650  65  19000000  435  650  000000	100000014100						-
	10.0000001100	_					-
437   830   EC   +0000000+00   +1000000+01	100000000000000000000000000000000000000	_					_
	001+1000000+01						
4 4 1   8 5 0   PC   + 0000000 + 00   + 1000000 + 01	100000001+100	_			<u>.</u> .		
	100000001+100						
	1000000011100						
	10+0000001+100	-		_			
	100000011100						41.0
A SOIPCI	+0000001:120:22222						
850 PC	104000001:100:000000:						9116
850 I PC	001+1000000+01				<b>-</b> -		97.14
	1 10000000+01						
	1.0+0000001+100				• •		
	100000001+100						
1457   850   PC   +0000000+00   +1000000+01	001+1000000+011						
145818501PC1+0000000+001+1000000+01	110+0000001+100			•			
145918501PC1+00000000+001+1000000+01	10+0000001+100	-					
1461   850   PC   +0000000+00   +1000000+01	100000001+100	-					9 7 1 9
1462 850 PC +0000000+00 +1000000+01	10000001+100	•					
	10000000+000						
147018501PC1+0000000+001	001+1000000+011	-					41.00
471   850   PC   +00000000+							
147218501PC1+0000000+0	+0000000+001+1000000+011	-		_	_	-	
				-		-	-   -
	- ~		- 4	- `		- 1	- r
) )	7	<b>.</b>	o .	•		•	_
n	<b>.</b>	<b>o</b>	-	2		m	<u></u>

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 11 of 20)

	CALIBRATIO	ON COEFFICE	CALIBRATION COEFFICIENTS/LINEAR	SEGMENTS			X
0 <b>V</b>	<b></b>	A2	¥3	<b>8</b>			
00+000000	+0000000+001+1000000+011						4116
100+0000000+	+0000000+001+1000000+011 +0000000+001+1000000+011						
850 IPC   +0000000+001	1+1000000+011						41.6
479   850   PC   +0000000+00   479   850   PC   +00000000+00			. <b>_</b>				
480   850   PC   +0000000 +000	11+10000000+011						14116
00+0000000	850   PC   +0000000+00   +1000000+01			. — -			14116
00+0000000	850   PC   +00000000+00   +10000000+01						
00+0000000	850 [PC +0000000+01						14116
00+00000000	850   PC   +0000000 +00   +1000000 +01						
000000000000000000000000000000000000000	+0000000+001+1000000+011						41.6
00+0000000	10000001+100+000000+						14116
000000000000000000000000000000000000000	+0000000+00 +1000000+01						14116
00000000	+0000000+001+1000000+011		_	_			141
00000000	+0000001+1000000+011						
00000000	PC1+0000000+001+1000000+011				_	-	_
00000000	PC1+0000000+001+1000000+011		_	_			14116
0+0000000+	851  PC  +0000000+00  +1000000+01						
000000000000000000000000000000000000000	851   PC  +0000000+00  +1000000+011						_
00000000	851 [PC +0000000+1000000+01]		. –		_		
00000000	851   PC   +0000000+00   +1000000+01   851   PC   +0000000+01						14116
-	-	-	-			-	-
	. 7	4	5	9		7	~ ·
80	6	0	1	2		<b>٣</b>	6

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 12 of 20)

CALIBRATION COEFFICIENTS/LINEAR SEGMENTS
•
+10000000+01
+1000000+01
PC   +0000000+00   +1000000+01
PC   +0000000+00   +1000000+01
PC +0000000+00 +1000000+01 PC +0000000+00
PC +0000000+00 +1000000+01
PC   +0000000+00   +1000000+01
PC   +0000000 +00   +1000000 +01   PC   +000000 +01
+1000000+01
+0000000+001+1000000+011 +0000000+0001+1000000+
+10000001+
+10000000+01
+10000000+01
+100000001+100+0000000+
+0000001+100+0010+00000+
+0000000+100+000000+011
+0000000+00 +1000000+01
+0000000+001-10000000+
+0000000+000+0000000+011
+10000000+011
+1000000+011
+0000000+100+000000+
PC   +0000000+00  +10000000+01
-
2
6

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 13 of 20)

) O K K	01AY1 01AY1 1LP1 1IE1		CALIBRATI	ON COEFFICE	CALIBRATION COEFFICIENTS/LINEAR	SEGMENTS			E IT
~ = = -	8 K K								
	 	0 <b>4</b>	 Z	<b>7</b>	~	 -	£		2
04718511	HPC	100+0000000+	PC  +0000000+00  +1000000+01						14116
049   851	I PC	PC  +0000000+00							14116
050   051	PC	PC +0000000+00	1 + 1 00 00 00 + 0 1 + 1 00 00 00 00 + 0 1						
052   851		PC1+000000+001	PC +000000+00 +1000000+01						14116
054 (851 (054 (851 )	1 20	054 (851 (PC) +00000000+001	1 + 1 00 00 00 + 0 1						-
055185	1 PC	00+0000000+1	851   PC   +0000000+00   +1000000+01						14116
056 85	1 PC	00+0000000+1	851   PC   +0000000+00   +1000000+01   851   PC   +0000000+00   +1000000+01					- –	
		00+0000000+1	PC1+0000000+001+1000000+011						41 6
060   851		00+0000000+1	+0000000+001+1000000+011				_	_	_
0611851	1   PC	30+0000000+1	110+0000001+100+000000+						14116
063   851	1 1 2 2	851 [PC] +00000000+001 851 [PC] +00000000+001	01+1000000+011					- <b>-</b>	-
064   851  PC	1   PC	100+0000000+1			•				41.6
065   851	1 PC	PC  +0000000+100	PC +0000000+100 +1000000401						
067   851	1 PC	0000000+1	PC +0000000+00 +1000000+01				_	_	141161
068185	1 PC	0+0000000+1	851   PC  +0000000+00  +1000000+01		_	_			4116
5816901	1 PC	10+0000000+1	851 PC   +0000000+00   +1000000+01						4116
20/0/0/	2 6	0000000+1	851   PC   +0000000 +00   +1000000 +01   851   BC   +0000000 +00   +1000000 +01					-	14116
	IPCI	10+0000000+1	110+0000001+10000000+			_	-	-	14116
		0+0000000+1	+0000000+001+10000000+011		_	_	-	-	14116
074   851		PCI+0000000+001	01+1000000+011		_				4116
1075   851	1 PC	100+00000000+104	#PC +0000000+00 +1000000+01						4116
1077   851	I PC	0+00000000+1	+0000000+000+1000000+011				. —	-	14116
-	-		-	-	-	_		_	-
- 0	0	-	2	4	\$	9		,	7
£	۲ ,	<b>c</b> c	6	0	-	2		<u>م</u>	<b>3</b>

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 14 of 20)

N	z 0 ~ ~		CALIBRAT	ION COEFFICE	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS .			
T	<u> </u>			; — ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;		t t t t t t t t t t t t t t t t t t t		· ·	<u> </u>
	<u> </u>		 4	6	 «	44	<b>A</b> 5		
N	= =	: -	:	<b>!</b>	:	•	:	. –	_
N	<u>o</u> _	_	_		_		_	_	-
#5.1   PC   +0000000+00   +1000000+01   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010   +1010	_	_	_		-		_	_ !	-
851   PCC   +0000000+00   +1000000+01	851				_			_	41   6
## ## ## ## ## ## ## ## ## ## ## ## ##			1+10000001+1		_		_	-	_
851   PC   +0000000+001   1000000+01   141   141   141   142   140000000+001   10000000+01   141   141   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142   142			1+10000001+1		_		_	_	-
851   PC   +00000000+00   +10000000+01		100+0000000+1:	1+10000001+1		_		_	_	-
851   PC   +00000000+00   +1000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+00   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +1000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01   +10000000+01		00+0000000+1	1+1000000+01+						
851   PC   +0000000+001   1000000+01   1000000+01   1000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   10000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   100	083 851 PC	00+0000000+1	1100000011						41.10
851 PC   +0000000+001 + 1000000+01	084 851 PC	00+0000000+1	110000001+1						
851 PC1+0000000+001+1000000+011	0861851 PC	00+0000000+1	+1000000+011		_			_	41   6
#\$51 PC +0000000+00 +1000000+01	087   851   PC	00+00000000+1:	1+10000001+1		_		_	_	_
851 PC +000000+00 +1000000+01  851 PC +0000000+00  +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +10000000+00 +10000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000	0881851 PC	00+0000000+10	1+10000001+1		_		_	_	_
851   PC   +0000000+001   1000000+01   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101	089   851   PC	00+0000000+12	1+1000000+01						41.6
851 PC   +0000000+001   1000000+01   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141	090   851   PC	00+0000000+1	1+1000000+01						
S51   PC   +0000000+00  +1000000+01		00+0000000+1	1+1000000+011						_
#   #   #   #   #   #   #   #   #   #		00+0000000+1	110000001+1				_	-	_
#   #   #   #   #   #   #   #   #   #	851	00+00000000+12	1+10000001+1		_		_	_	
#\$51 PC +0000000+00 +1000000+01  #\$51 PC +00000000+00 +1000000+01  #\$51 PC +0000000+00 +100000+00 +1000000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +1000000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +1000000+00 +100000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +1000000+00 +100000+00 +100000+00 +100000+00 +100000+00 +1000000+00 +100000+00 +1000000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +100000+00 +	851	00+0000000+1	+1000000+01		_				_
851   PC   +0000000+001   +0000000+001   +0000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +00000000+001   +0000000+001   +0000000+001   +0000000+001   +0000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+001   +000000000+001   +00000000+001   +00000000+001   +00000000+001   +00000000+00	851	00+0000000+1	1.00000001+1						9114
	100	00+0000000+11							
#\$1 PC +000000+00 +100000+01  #\$1 PC +0000000+00 +1000000+01  #\$1 PC +0000000+01   5.1									
#   #   #   #   #   #   #   #   #   #	851	00+0000000+1	1+1000000+01		_		_	. <b>–</b>	_
#   #   #   #   #   #   #   #   #   #	851	00+0000000+12	1+10000001+1		_		_	-	
#   #   #   #   #   #   #   #   #   #	851	00+0000000+12	1+1000000+01		_		_	_	_
##   ##   ##   ##   ##   ##   ##   #		00+00000000+12	1+1000000+011		_		_	_	_
##   ##   ##   ##   ##   ##   ##   #	851	00+0000000+13	1+100000001+1		_		_	_	
##51 PC +0000000+00 +1000000+01	105   851   PC	00+0000000+12	1+1000000+011		_		_	_	
#51 PC +0000000+00 +1000000+01	106   851   PC	00+0000000+12	1+1000000+01						
#51 PC +0000000+00 +1000000+01	1821	00+0000000+10	1+1000000+1						
	1851	00+0000000+10	11000000111	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	1 1		- !	9 1 1
	- ·		_ <	- •	_ ,	- \			
	0		7	-	n .	۰ ۵			٠,

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 15 of 20)

B	R   A   A   A   A   A   A   A   A   A						-
	100+00000 100+00000 100+00000 100+00000 100+00000 100+00000 100+00000 100+00000	11000000+011			ζ.		
PC  +000   PC  +000   PC  +000   PC  +000   PC  +000   PC  +000	100000000000000000000000000000000000000	+1000000+011	74	2	č	2	
PC   +00C		+1000000+011	6 5 4 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	
1   PC   +000 1   PC   +000 1   PC   +000 1   PC   +000	100+00000						==
1   PC   +000 1   PC   +000 1   PC   +000 1   PC   +000	100+00000	+10000001+				_	= :
1   PC   +000 1   PC   +000	100+00000	+1000000+011					==
1   PC   +000	100+00000	+1000000+011				_	141
		851 [PC +0000000+00 +1000000+01]					
1   PC   +000	100+00000	851   PC   +0000000+00   +1000000+01   851   PC   +00000000+00   +1000000+01					==
1   PC   +000	100+00000	851   PC   +0000000+00   +1000000+01		_		-	141
851   PC   +000	100+00000	+0000000+001+1000000+011					
2 2	100+00000	+000000+001+1000000+011			_	- <b>-</b>	
PC	100+00000	+0000000+001+1000000+011					<del>-</del> -
851   PC   +000 851   PC   +000	100+00000	+0000000+011					-
2 2	100+00000	+000000+001+1000000+011				_	= :
PC 1	100+00000	+0000000+001+1000000+011		_ =			
851 (PC) +000	100+0000000+	+0000001+1000000+011	•				-
851   PC   +00	100+00000	PC  +0000000+00  +1000000+01		_	_	_	141
PCI	100+00000	+0000000+001+1000000+011					= =
132   851   PC  +00	100+00000	PC  +0000000+00  +1000000+01					
	000000	FC  +0000000+00  +1000000+01					-
851  PC  +00	0000000	PC1+000000+001+1000000+011		_	_	_	+ 141
PC	00+00000	+0000000+001+1000000+011		_	_	_	-
l bc l	0000000	+0000000+001+10000000+011			_		
PC	00+00000	+0000000+001+1000000+011					
851   PC  +00	00+00000	+0000000+001+10000000+011	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-	- :
- 4		- 6	_ <	v	<u> </u>		
0 1	- 0	¥ 0	, C	۰ -	, <		- ~

TABLE 2.7-4. POIC DISPLAY REQUIREMENTS (Sheet 16 of 20)

No.   1.2P   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.	E NIC	NICT	==	CALIBRAT	ION COEFFIC	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS		- <b>-</b> -		:   E
		11.8	<b>.</b>							<u> </u>	_ < 4
	Y E	<b>E</b>			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	-		<u>-</u>	2 -
	_	<u> </u>					_	- ;		= 9	89 -
	_	=	P0	I A1	A2	. <b>A</b> 3	- A4	¥ 	 _	2 -	
	_	_	_	_		_					
#\$1   PC   + 0000000+01	-	0	_	_			_	<b>-</b> .			
## 1   PC   + 00000004-00   + 10000004-01	-	<u> </u>	_	_		_		- !		- !	- į
###			00.000000000000000000000000000000000000	1000000000	 		· -	_	_	4	1   6
#\$11   PCC   +00000000+001   1   1   1   1   1   1   1   1   1	140 6.		00+0000000+11	1+10000001+1				. –	_	_	1 6
## 551   PCC   + 00000000+001   1   1   1   1   1   1   1   1   1	14218		00+0000000+1	1+1000000+01			_	_	_	_	
851   PC   +0000000+00   +1000000+01	14318		00+0000000+12	1+1000000+011		_	_	_	_	-	9 :
#\$51 PC +0000000+00 +1000000+01  #\$51 PC +0000000+00 +1000000+01  #\$51 PC +00000000+00 1000000+01  #\$51 PC +00000000+00  +1000000+01  #\$51 PC +00000000+00  +1000000+01  #\$51 PC +000000000+00 +1000000+01  #\$51 PC +000000000+00 +10000000+01  #\$51 PC +000000000+00 +10000000+01  #\$51 PC +00000000000000000000000000000000000		_	00+0000000+12	1+10000000+011		_	_	_		_	9
851   PC   +0000000+00   +1000000+01			00+0000000+10	1+1000000+011		_	_			-	9 :
851   PC   +0000000+001   141000000+01   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   1411   141		_		1+10000001+1		_					9 7
#\$1 PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +0000000+00 +1000000+01  #\$2  PC +00000000+00  +1000000+01  #\$2  PC +000000000+00 +1000000+01  #\$2  PC +0000000000000+01  #\$2  PC +0000000000000+01  #\$2  PC +0000000000000000000000000000000000	14718		00+0000000+10	1+10000001+1		_					9 4
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +00000000+00 +1000000+00 +10000000+00 +1000000+00 +1000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +100000000		_	00+0000000+10	1+1000000+01							9
851   PC[+0000000+001+1000000+01]   851   PC[+00000000+001+10000000+01]   851   PC[+00000000+001+10000000+01]   851   PC[+00000000+001+10000000+01]   851   PC[+00000000+001+10000000+01]   851   PC[+0000000+001+10000000+01]   851   PC[+0000000+001+10000000+01]   851   PC[+0000000+001+10000000+01]   851   PC[+00000000+001+10000000+01]    851   PC[+000000000+001+10000000+01]   851   PC[+00000000000+01+10000000+01]   851   PC[+0000000000+01+10000000+01]   851   PC[+0000000000000+01+10000000+01]   851   PC[+00000000000000+01+10000000+01]   851   PC[+000000000000000+01+100000000+01]   851   PC[+000000000000000000000000000000000000	149 8	51 I P(	00+0000000+10	110000000+01						-	-
Sil   PC   + 0000000+00   + 1   1	150   8	51 P	00+0000000+10	110000001+1					_		=
1	151   8	51 P	C +0000000+10	10+0000001+11						_	Ξ
S51   PC   +0000000+00   +1000000+01		7116	00+0000000+12	110000001+10					_	_	1   6
851   PC   +0000000+00  +1000000+01			00+0000000+13	1+1000000+01		_	_	_	_	_	
### 1   PC   +0000000+00   +1000000+01		51 19	00+0000000+13	11+1000000+01		_	_	_	_	_	
### ### ##############################		51 P	C1+0000000+00	1+1000000+011	_	_	_	_		_ :	9
#\$51 PC +0000000+00 +1000000+01  #\$1 PC +0000000+00 +1000000+01  #\$1 PC +0000000+00 +1000000+01  #\$1 PC +0000000+00 +1000000+01  #\$1 PC +00000000+00   +1000000+01  #\$1 PC +000000000+00 +10000000+01  #\$1 PC +000000000000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +100000000		5119	CI+0000000+00	110+0000001+10	_	_	_	_	_		= :
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01			CI+0000000+10	1+1000000+01	_	_	_				Ξ.
#\$11PC +0000000+00 +1000000+01  #\$51PC +00000000+00   +1000000+01  #\$51PC +000000000+00 +1000000+01  #\$51PC +000000000+00 +1000000+01  #\$51PC +0000000000000+00 +10000000+01  #\$51PC +00000000000+00 +1000000+01  #\$51PC +00000000000000000+01  #\$51PC +00000000000000000000+01  #\$51PC +000000000000000000000000000000000000			C1+0000000+00	1+1000000+01	_	_					
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +00000000000+00 +1000000+01  851 PC +000000000000+01 +10000000+01  851 PC +000000000000+01 +10000000+01  851 PC +00000000000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +100000000	160   8		CI+0000000+0C	1+10000001+01	_	_					
851   PC  +0000000+00  +1000000+01		151 I P	C1+0000000+0C	1+1000000+01	_						= =
851   PC  +0000000+00  +1000000+01	162   8	151 I P	CI+0000000+0C	10+0000001+10	_	_					1 =
851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +1000000+01  851 PC +0000000+00  +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +00000000+00 +10000000+01  851 PC +0000000000000+01 +10000000+01  851 PC +000000000+01 +10000000+01  851 PC +00000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01 +10000000+01	16318	151 I P	CI+0000000+0C	10+10000001+10	_	_					3 5
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +00000000+00 +1000000+01  851 PC +0000000000+00 +1000000+01  851 PC +00000000000+00 +1000000+01  851 PC +000000000000+00 +1000000+01  851 PC +000000000000+00 +1000000+01  851 PC +00000000000+00 +1000000+01  851 PC +000000000000+00 +1000000+01  851 PC +00000000000000+00 +10000000+01  851 PC +000000000000000+00 +10000000+01  851 PC +000000000000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +1000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +10000000+00 +100000000	16418	151 I P	C1+0000000+0C	1 + 1 0000000 + 0 0	_	_	<u> </u>				= =
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01  851 PC +000000000000+01  851 PC +000000000000+01  851 PC +000000000000+01  851 PC +0000000000000+01  851 PC +00000000000000000000000000000000000	16518	_	CI+0000000+00	1 + 1 000000 + 01	_	_					: :
8511PC1+0000000+001+1000000+011	16618	151   P	C1+0000000+0C	01+1000000+01	_	_					: :
851 PC +0000000+00 +1000000+01  851 PC +0000000+00 +1000000+01    851 PC +0000000+00 +1000000+01    1		_	C1+0000000+00	01+1000000+01	<b>-</b>						: =
851 PC +0000000+00 +1000000+01   851 PC +0000000+00 +1000000+01   1	1 68	_	CI+0000000+00	01+1000000+01							- [
#51  VC  +U000000101  -	116916	_	01+0000000+10	1 + 1 000000 + 01							-
_	10/11	- 1		101000001110		-	-   -   -   -   -   -   -   -   -   -	- 1	-		- 1
	-	<u>-</u>	_	_ (	_ •	- 4	- 4				- ~
	0	0	_	7		n ,	,		- ~		

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 17 of 20)

R BIR IIE	IE;						2 × 9
 	7	ī	75 75	A3	¥	A 5	
1 185117	2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	IN I I I I I I I I I I I I I I I I I I		-   -	; ; ; ; ; ;		-   -
172   851	PC +0000000+0	851   PC   +0000000+00  +1000000+01  851   PC   +0000000+00  +1000000+01  851   PC   +0000000+00  +1000000+01					
174   851	PCI+00000000+0	PC +0000000+00 +1000000+01					= :
851	PC1+0000000+C	PCI+0000000+001+1000000+011					==
78   851   78   851	PC +00000000+0	PC +0000000+00 +1000000+01  PC +0000000+00	-				==
791851	PC +0000000+0	79   851   PC   +0000000+00   +1000000+01					
81   851	PC +00000000+0	180   851   PC   +0000000+00  +1000000+01  181   851   PC   +0000000+00  +1000000+01		<del></del>			<u>-</u> -
182   851	PC +0000000+0	182   851   PC   +0000000+001 + 1000000+01					<b>=</b> :
184   851	PCI+0000000+0	851   PC   +0000000+00   +1000000+01					
185   851	PC +00000000+0 PC +00000000+0	PC1+0000000+001+10000000+011					<b>-</b>
851	PC +0000000+0	+00000001+100+0000000+					
188   851	PC +00000000+C	PC +00000000+00 +10000000+01  PC +00000000+00 +1000000+01					
_	PC +000000040	PC +0000000100 +1000000+01	- <del>-</del>				
191   851	PC +00000000+0 PC +00000000+0	91   851   PC   +0000000+00  +1000000+01   92   851   PC   +0000000+00  +1000000+01					- 41
93   851	PC +0000000+0	193   851   PC   +0000000+00   +1000000+01					-
194   851	PC +00000000+0	851  PC  +0000000+00  +1000000+01	-	-		_	141
195   851	PC1+00000000+0	851   PC  +0000000+00  +1000000+01  851   PC  +0000000+00  +1000000+01					
8511	PC1+0000000+0	851   PC   +0000000+00   +1000000+01					
851	PCI +00000000+0	PC  +0000000+00  +1000000+01	-	-			
1991851	PC1+0000000+0	PCI+000000+001+1000000+011					-
851	PCI+0000000+0	IPC1+0000000+001+1000000+011		<del>-</del> -			
!		-	-	-		-	† † ( !
0	0	2	•	S	9		•
٠,	•					-	

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 18 of 20)

	181     181     181	CALIBRATIC	ON COEFFICIE	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	SEGMENTS	 	<del>-</del>	E T
> - = -	B		<del></del>		7			1 B -
	11 - A0	 W	<b>V</b>	<del>-</del>	Č	G 	<b>-</b>	<u></u>
	 0 <u>z</u>		!	·		-	- !	- !
202185	100+000000000+1001158	01+1000000+011	-			_	-	-
203185	203 851 PC +0000000+00	01+10000001+10						41 6
204185	204   851   PC   +00000000+00	01+10000000+011	-	_				_
205   85	205 851 PC +000000450 +1000000+3	01+10000001011	· <b>-</b>	. —		_	-	=
207185	851   PC   +0000000+00  +1000000+01	01+1000000+011	_			_		= =
208   85	851   PC   +0000000+00  +1000000+01	01+10000000+011	_					=======================================
209185	851   PC1+0000000+00 +1000000+01	01+1000000+011	_					=
210185	851   PC   +0000000+00   +1000000+01	01+1000000+01	-				-	=
211   85	851   PC  + 0000000 + 00  + 1000000+01 851   PC  + 0000000 + 00  + 1000000+01	01+1000000+011					_	7
	851   PC   +0000000+00   +1000000+01	01+10000001+10	_		_	_		₹ :
	PC	01+10000001+10	_		_			=
	PC	+0000000+001+1000000+011						=
	PC	+0000000+100+1000000+					_	=
217185	851 PC +0000000+0 851 PC +0000000+0	+ 0000000 + 001 + 1000000 + 0 + 1				_	-	143
	2 2	+000000+10000000+			_	_	-	=
	PC	+0000000+100+1000000+			_			= =
221185	851 PC   +0000000+001	101+10000000+011						= =
1222185	851   PC   +0000000+0	+0000000+001+1000000+						- 4
223185	851   PC   +0000000+00  +100000+01	101-10000001-101				. –	_	=
122418	224   851   PC   +000000401 +1000000401	110000004911				. <b>-</b>	-	143
9615677	851   FC   +0000000   500   1000000   5000000   50000000   50000000   500000000	100000011100			_	_	-	41
9333186	851 1961 +0000000 + 10001 + 100000+01	11000000+011		_	_	_	_	- 4
22818	851   PC   + 0000000+00   + 1000000+01	10000000+01			_	_	_	4.
122918	851 PC   +000000+00   +1000000+01	101+10000001+100		_	_	_		1 3
23018	851   PC   +0000000+C	PC1+0000000+001+1000000+011						= =
_		PC1+0000000+001+1000000+011						Ξ
123218	851   PC   +0000000+t						-	-
	_ (	_ ^	- 4	- 10			7	, -
=								

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 19 of 20)

No.   1	z o		CALIBRATI	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	IENTS/LINEAF	SEGMENTS			<u> </u>
No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.   No.	~ ~		•						
T   A0		-					-		<u>a</u> _
1   1   1   1   1   1   1   1   1   1	<u> </u>	· ·		Ş					= 9
10   1   1   1   1   1   1   1   1   1	: <del>:</del> 	2	 -	7	ê 	<b>.</b>	< 		2 _
N   1   1   1   1   1   1   1   1   1	<u>o</u>	_	_		_	_	_	_	-
1851   PCT   00000000+00   1   10000000+01   1   1   1   1   1   1   1   1   1	<u>z</u> -	_	_		_	-	_	-	_
SET   PCT   +000 00000+001   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   100000000+01   100000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01		00+0000000+1	1+1000000+011			-	-	-	141
18.11   PCT   10000000+001   1000000+01   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101		00+0000000+1:	1+1000000+01					-	14
## ## ## ## ## ## ## ## ## ## ## ## ##	15   851   PC	00+0000000+1:	1+1000000+011			_	_	_	141
851 PCT   400000000+001   10000000+01   110000000+01   1100000000+01   1100000000+01   1100000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   110000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   11000000+01   1100000	6   851   PC	00+0000000+i:	1+1000000+011			_	_	_	141
851   PC   +0000000+00   +1000000+01	17   851   PC	00+0000000+1	1+1000000+011			_	_	-	=
851 PC   +00000000+001   1000000+01   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141	18   851   PC	00+0000000+1	1+1000000+011			_	_	-	
851 PC   +00000000+001   1   1   1   1   1   1   1   1   1						_	_	_	=
#\$51 PC1+0000000+001+1000000+01	100							-	=
#\$1   PC   10000000 + 00   1000000 + 01   10   10	100		1+1000000+01						=
SET   PCC   +00000000+001   1000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   10000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   100000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   1000000+01   10000000+01   10000000+01   10000000+01   1000000+01   1000000+01   10000000+01   1000000+01   1000000+01   10000000+01	1851		1+1000000+01						= =
#\$51 PC +0000000+00 +1000000+01  #\$51 PC +0000000+00 +1000000+01  #\$51 PC +0000000+00 +1000000+01  #\$51 PC +0000000+00 +10000000+01  #\$51 PC +0000000+00 +10000000+01  #\$51 PC +0000000+00 +10000000+01  #\$51 PC +00000000+00 +1000000+01  #\$51 PC +000000000+00 0 +1000000+01  #\$51 PC +00000000000+00 +1000000+01  #\$51 PC +0000000000+00 +1000000+01  #\$51 PC +0000000000+00 +1000000+01  #\$51 PC +0000000000+00 +1000000+01  #\$51 PC +0000000000+00 +1000000+01  #\$51 PC +00000000000+00 +1000000+01  #\$51 PC +0000000000+00 +1000000+01  #\$51 PC +0000000000+00 +1000000+01  #\$51 PC +0000000000+00 +10000000+01  #\$51 PC +0000000000+00 +10000000+01  #\$51 PC +0000000000+00 +10000000+01  #\$51 PC +0000000000000+00 +10000000+01  #\$51 PC +0000000000000000000+00 +10000000+01  #\$51 PC +000000000000000+00 +100000000+01  #\$51 PC +0000000000000000+00 +1000000000000+00 +100000000	-	00+0000000+1	1+1000000+011				_		7 9
851   PC   +0000000+00   +1000000+01	5   851   PC	00+0000000+1:	1+1000000+011					-	=
851   PC   +0000000+001   1000000+01   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101   101	61851 IPC	00+0000000+1	1+1000000+011			_	_	-	41
#51 PC +0000000+001 1000000+01  #51 PC +00000000+001  1000000+01 100000+01 100000+01 100000+01 100000+01 100000+01 100000+01 100000+01 100000+01 100000+01 100000+01 100000+01 1000000+01 1000000+01 100000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 1000000+01 100000	7   851   PC	00+0000000+1	1+1000000+011			_	_	_	141
851 PC1+0000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+01   851 PC1+00000000		00+0000000+1	1+1000000+01			_	_	_	-41
851 PC (+0000000+001+1000000+01)		00+0000000+1	1+1000000+01						4
851 PC (+0000000+001+1000000+01) 851 PC (+0000000+001+1000000+01) 851 PC (+0000000+001+1000000+01) 851 PC (+00000000+001+1000000+01) 851 PC (+00000000+001+1000000+01) 851 PC (+00000000+001+1000000+01) 851 PC (+0000000+001+1000000+01) 851 PC (+0000000+001+1000000+01) 851 PC (+0000000+001+1000000+01) 851 PC (+00000000+001+1000000+01) 851 PC (+00000000+01+1000000+01) 000000+01) 851 PC (+00000000+01+1000000+01+1000000+01+1000000		00+0000000+1	1+1000000+01						
851   PC   +0000000+001   1000000+01   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141		00+0000000+1	1+1000000+011						= =
851 PC1+0000000+001+1000000+011	1851	00+0000000+1	1+1000000+01	_					=======================================
851 PC1+000000+001+1000000+01  851 PC1+0000000+001+10000000+01  851 PC1+00000000+001+10000000+01  851 PC1+00000000+001+10000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+500000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+0000000+001+1000000+01  851 PC1+00000000+001+1000000+01  851 PC1+00000000+01  51 PC1+00000000+01  51 PC1+00000000+01  851 PC1+00000000+01  851 PC1+000000	851	00+0000000+1	1+1000000+011	_		_	. <b>_</b>	-	=
851   PC   +0000000+001   1000000+01   1   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141	851	00+0000000+1	1+1000000+011			_	_	_	141
851 PC 1+0000000+001 + 1000000+01   1   141   851 PC 1+0000000+001   1   141   851 PC 1+0000000+001   1   141   851 PC 1+0000000+001   1   141   141   851 PC 1+0000000+001   1   141   141   851 PC 1+0000000+001   1   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141   141		00+0000000+1	1+1000000+011			-	_	_	141
#\$51 PC +0000000+001  #\$51 PC +00000000+001  #\$51 PC +0000000+001 +1000000+01  #\$51 PC +0000000+001 +10000000+01  #\$51 PC +0000000+001 +10000000+01  #\$51 PC +0000000+001 +5000000-01  #\$51 PC +00000000+001 +5000000-01  #\$51 PC +00000000+001 +5000000-01  #\$51 PC +00000000+001 +5000000-01		00+0000000+1	1+1000000+011	_		_	_	-	Ξ
851 PC1+0000000+001+1000000+011		00+0000000+1	1+1000000+01						= :
8511PC1+0000000+001+1000000+011	2.5	00+000000+1	110000001011			<b>.</b>			= :
851 PC +000000+00 +1000000+01	851	00+0000000+1	1+1000000+011						
	851		1+1000000+011	-					7 7
,	1851		1+5000000-011	-					4
		_			-	-		-	-
_	_	-	. 0	• •	ۍ .	- 4		- 1	- (
		, α	4 0	, ,	` -	) r			- (

TABLE 2.74. POIC DISPLAY REQUIREMENTS (Sheet 20 of 20)

IE NIC NICT	NICTI							1				///
O N N	UIO OINXI		CALIE	RATIC	N COEFFI	CALIBRATION COEFFICIENTS/LINEAR SEGMENTS	INEAR	SEGMENTS				1
TMIR	I.P											2 2
IR BIR	IE											4
IY EI	1B 1	1 1 1 1 1		1	1 1 1 1 1 1 1	1		1 1 1 1 1	· • • •	, ; ; ; ;		<u> </u>
- X	- «		_	-		_						1
_	<u> </u>		_	_		_	_	,		į	<u>.</u> -	
_	-	<b>¥</b> 0	- Al	-	A2	- A3	_	¥	_	c <b>&lt;</b>		 
. <del>-</del>	<u>-</u>		_			_	_		_		-	
- 				_			_		_			_
- 	- 2		_	-		-			_		-	_
	1 1 1 1 1 1			1 1 1 1			1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1	; ; ; .	
126518	51   PC   +0	0+000000	1265 851 PC +0000000+00 +1000000+01	1101		_	_		_		-	9
1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1		1 1				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	-	-     
_	_	_		_	_	_	-		_		٠,	- c
- «		_		`	•	_	S		و		_	<b>2</b> 0
>	<b>5</b>	-									<b>ب</b> م	0

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 1 of 14)

N C N	WARNING VALUES	VALUES	CRITICA	CRITICAL VALUES				1////
	(IELLON	LINE	וייייייין	LINE		101 51	STATE COUR	COUE 1////
2 02 2 22				_	EXCEPTION MONITOR MESSAGE		_	
<u></u>	UPPER	LOWER	UPPER	LOWER		=0	-	
<u> </u>	LIMIT	LIMIT	LIMIT	LIMIT/		_	_	_
- RI 10	_		_	(EXPECTED)		_	_	11 11
	_		_	STATE		_	_	ID IEI
001   850   EM	_		_	10	#1 (Tb1	1) lok	IFAIL	141171
100218501EM			_	-	OICDAS FAILURE-BITE #2 (Tb] 1)	TOK	IFAIL	141171
	_		_	-		NO.	OFF	141171
	-			-	PWR OFF	3301	2	
	-				PWR OFF	2	IOFF	141171
	-		_	-		XES.	, ON	141171
100618501EM	_			-	SCS PWR OFF (Tb) 1)	IOFF	N C	141171
	_		,	_		CN	7.5	141171
	-				OLCHAS PWR OFF (Th) 11	2	33.0	141171
						2 4		16116
						2 1	2 2	
			-		I a l	100	S .	1411
					VIENTRM TRAVEL LIMIT EXCEEDED	2	YES	411/
	_		_	_		YES	0 <u>N</u>	141171
			_	_		<u>N</u> O	IYES	141171
_			_	-	INO AVIONICS AIR-SCS #2 (Tb]	FAIL	<u>lok</u>	141171
_	_		_	_		IYES	ONI	141171
	_		_	-	1 NO AVIONICS AIR-PDS #2 (Tb)	FAIL	lok	141171
	_	•	-	_		0N	IYES	141171
	_		_		I   WATER OUTLET BYPASS	IBYPS	NORM	141171
	_		_	10	OIWATER OUTLET BYPASS	NORM	BYPS	141171
	-		_	-	INLET	BYPS	INORM	141171
	_		_	- -	OIWATER INLET BYPASS	NORM	BYPS	141171
	_		_	_		CLS	NGOI	141171
101918501	_		_	_		IOPN	CLS	141171
102018501	_		_	_		ICES	NAOI	141171
	_		_	_		IOPN	ICES	141171
	_		_	_		YES	ON	141171
102318501	_	_	_	_		ON I	IYES	141171
102418501	_	_	_	_		IYES	ONI	141171
102518501	_	_	_	_		ON	IYES	141171
102618501	_		_	_		IYES	NO	141171
102718501	_			_		ON I	IYES	141171
102818201	-	_	_	_		ON I	IYES	141171
	-					-		
- c		- ~	، -		- 3		- 7	- c
) )	٦ ,	7 0	<b>v</b> (	า ( า (	ο 、	- (	- (	ю « ж
ر د	7	n	æ	89	9	2	6	

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 2 of 14)

I IC N	I WIO	WARNING VALUES (YELLOW LINE)	ARNING VALUES (YELLOW LINE)		RITICA	CRITICAL VALUES (RED LINE)		  DI STA	///   DI STATE CODE ////	
UR	OY		1 1 1 1 1 1	<u> </u>	1	1	·		1	1
	N.	4	-			-	EXCEPTION MONITOR MESSAGE	- -		E 2
= = = = = = = = = = = = = = = = = = =		UPPER	LIMIT		UPPER	LIMIT/			<u>.</u> 	
<u>~</u>	<u>°</u>		_	_		EXPECTED	-	_	_	
-	<u> </u>		- !	-	       	STATE		-	- ;	10 E
10291850	0		_	-			_	ONI	IYES	
10301850	0		_	-		_	_	YES	<u>Q</u>	141171
10311850	- 10		_	-		_	_	ON.	YES	41171
10321850	_ ;							IYES	02.5	1411/1
1033   850	_		_					2 2 2	I ES	
0341850				<b>-</b> -				2 0	N N N	
0331350								2 2	7 7	
103618501	- : - :							201	2 2 2	7 7 7 7
0371820		_						2 2	1153	
103818201		_		-		_		Y :	FAIL	
10391850	-		_	-		_	_	<u>8</u>	FAIL	
10401850	-	_	_	-	-	_	_	<u>×</u>	FAIL	1411/
1041   850	_ 		_	-		_	_	Š	FAIL	1411/1
1042   850	- - 0	_	_	-		_	-	OK	FAIL	
104318501	- -	_	_	_		_	_	š	FAIL	_
10441850	10		_	-		_	_	NO.	FAIL	141171
1045   850	-	_	_	_		_		<u> 10</u> K	FAIL	141171
10461856	850   EM	_	_	-		_	NO AVIONICS AIR - PDS	FAIL	<u>o</u>	
10471850	850   EM	_	_	-		_	1 NO AVIONICS AIR - PCS #1	FAIL	<u>8</u>	_
04818501	-	_	_	-		_	_	NO.	IOFF	_
104918501	-	_	_			_	_	OFF	NO	14117
105810501	0	_	_	-		_		NO!	IOFF	141171
105118501	_ 	_	_	-		_	_	OFF	NO.	14117
1052   850   EM	0 EM	_		-		_	IFEA WATER FLOW #1	FAIL	<u>  0</u>	141171
1053   850   EM	OIEMI	_	_	-		_	1 INO AVIONICS AIR - SCS #1	FAIL	OK OK	141171
105418501	0	_	_	-		_	_	<u>×</u>	FAIL	141171
105818501	0	_	_	-		_		<u>  0</u>	FAIL	14117
10561850	- 10	_	_	_		_	_	-CK	FAIL	14117
10571850	-	_	_	-		_	_	NO.	FAIL	141171
10581850	-	_	_	_	•.	_	_	IOK	FAIL	141171
10591850	-			_		_		) YO	IFAIL	141171
106018501	-		_	_		_		OK	FAII.	141171
0611850	_ _		. <u>-</u>	_		_	_	lok	FAIL	141171
			-	1	-	-			-	-
- 0			- ~		- ~	- m	- 9	, ,	٠,	- œ - œ
) ·	_	• 0			ıœ	o ce		^	6	-
3	_	7	>		a		•	ų	`	) -

	3	VALUES	CRITICA	CRITICAL VALUES		_ :	( ) ( )	1////
	(YELLOW LINE)	LINE)	(RED	(RED LINE)		IS IOI	D1 STATE CODE ///	1////3
IN SIM TI				_	EXCEPTION MONITOR MESSAGE		_	
<u> </u>	UPPER	LOWER	UPPER	LOWER		#0 -	<del>-</del>	_
IY E! IT		LIMIT	LIMIT	LIMIT/		_	_	_
_			_	EXPECTED			_	_
<u>~</u> -	_	_	_	STATE		_	_	<u>a</u> o
106218501				_		NO	IOFF	141171
106318501	_		_	_		OFF	NO.	141171
1064   850	_	_	_	_		NO.	IOFF	
106818501	_	_	_	_		OFF	NO.	141171
105819901	-	_	_	_		NO.	OFF	14117
106718501	_	_	_	_		OFF	NO.	141171
106818501	_	_	witter	_		NO.	IOFF.	_
106918501	_	_	_	_		OFF	NO.	
02018201	_	_				N C	101	7 1 5
107118501							2 0	
10/2/8501						200	2 2	7 - 7
10/3/850/						100	200	
107418501			_			N 0	2 2	
102518501	_						NO.	411
10.8819101	_	_	_	_		N C	10 5	1411
107718501	_	_		_		OFF	NO :	411
107818501	_	_		_		YES	0 I	1411/1
102816201	_	_		_		ON !	YES	141
108018201	_	_	_	_		IYES	0	1411/1
108118201	_	_	_	_		<u> </u>	YES	14117
1082   850	_	_	_	_		IXES	<u>2</u>	4117
108318201	_	_	_	_		2	YES	141171
108418501	_	_	_	_		CLS	NAO	411/1
108818801	_	_	_	_		NGO	CLS	41 7
108618501	_	_	_	_		NO !	OFF	1411/1
1081/801	_	_	_	_		1	2 !	1411/1
1088   820	_	_	_	_		S C	10.	1411/1
108816801	_		_	_		IOFF	<u>N</u>	141171
1038   060	_	_	_	<del>-</del>		N O	OFF	141171
109118501	_	_	_	_		OFF	NO.	14117
109218501	_	_	_	_		NO.	OFF	14117
109318501	_	_	_	_		IOFF	NO O	14117
109418501	_	_	_	_		N C	IOFF	141171
	-		-			-	_	
- c		- ^	- ^	- ~	- vc		- 1	- 60
	۰, ۲	v C	, 0	ה מ היי	. 4	~ ~		, r
n -	7	>	0		•	J	•	-

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 4 of 14)

I   I   I   I   I   I   I   I   I   I		WARNING VALUES (YELLOW LINE)	ARNING VALUES (YELLOW LINE)	CRITICAL VAI	CRITICAL VALUES (RED LINE)		l IDI ST	////	111113
TI   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT	UIR	1 1 1 1 1 1	1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_			
TE   UPPER   LOWER   UPPER   LOWER	Ξ			_		EXCEPTION MONITOR MESSAGE	_	_	
1	<u></u>	UPPER	LOWER	I UPPER	LOWER		= 0 	<u>"</u> 	
STATE	<u>.</u>	THUTT	716177		LIGHT!				
1   1   1   1   1   1   1   1   1   1					STATE				
11   10   15   15   15   15   15   15	109518501	1				· • · · · · · · · · · · · · · · · · · ·	loff	NOI	14117
100 AVIONICS AIR - PCS #2   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   OK   FAIL   OK   OK   OK   OK   OK   OK   OK   O	100000000000000000000000000000000000000						EATI	3	14117
850   FAIL   100 MILLITY PWR OFF   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   FAIL   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K   100 K	I Mai ocal acol			_		TIER MAILS FLOW #2		Š	7117
10	109/18501EM		_		_	AVIONICS AIR - PCS	FALL	Y :	116
10K	103818601		_	_			<u>ŏ</u>	FAIL	141
1	103816601		_	_	_		lok	FAIL	14117
1	1100/850/		_	_	_	_	-CK	FAIL	14117
1			_	_	_		IOK	FAIL	14117
1	1102   850		_	_		_	lok	FAIL	14117
1   1   1   1   1   1   1   1   1   1	1103   850		_	_	_		OK	FAIL	141   7
EM	110418501		_	_	_		OK	FAIL	14117
EM	110518501			_	_	_	Ö	FAIL	14117
EM					0	UTILITY PWR	NO	OFF	14117
ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	110718501EM					UTILITY PWR	OFF	NO	14117
OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	110818011			_			ON	OFF	14117
ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	110918501					_	OFF	NO	141   7
OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	111018501		_	_	_	_	NO.	OFF	14117
ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	111118501				_		OFF	NOI	14117
OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	1112   850			_			NO.	IOFF	14117
ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	111318501			_	_		OFF	NO.	14117
OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	1114   850		_	_	_	_	NOI	IOFF	14117
OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	1115   850		_	_	_	_	IOFF	NO	14117
OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	111618501	_	_	_	_	_	NOI	IOFF	14117
100	1117/8501	_		_	_		IOFF	NO.	14117
OFF   ON   141   OFF   ON   141   OFF   ON   141   OFF   ON   141   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	1118   850		_	_	_	_	NO!	IOFF	14117
10	111918501			_	_		1066	<u>NO</u>	14117
ON   OFF   141   ON   OFF   141   ON   OFF   141   ON   OFF   141   ON   OFF   141   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	112018501		_	_	_	_	OFF	NO.	14117
ON   OFF   141   OFF   141   OFF   ON   OFF   141   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   OFF   ON   ON	1121   850	_	_	_	_		ON	OFF	14117
	112218501	_	_	_	_	_	NO.	OFF	14117
	1123   850			_	_	_	OFF	NO.	41
1	1124   850	_	_		_	_	NO.	IOFF	14117
	1125   850	_	_	_	_	_	IOFF	NO.	14117
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	112618501	_	_	-	_		NO.	OFF	14117
	1127   850		_			_	IOFF	NOI	14117
0 1 2 2 33 6 7 7 8	-	-	-	-			-	-	-
					. (r	9	,	7	· œ
		+ (	4 0	4 3		,	. ^	. 0	

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 5 of 14)

WARNING VALUES (YELLOW LINE)	<del> </del>	CRITICAL VALUES (RED LINE)		IDI ST	STATE COD	////tagoo
3	1 1000	- 1 Ower	EXCEPTION MONITOR MESSAGE	 		E Z
LIMIT		LIMIT/		- <b>-</b>		
		EXPECTED				1 1 1 1 1 1
1		-		NOI	IOFF	14117
	. <b>–</b>	_		IOFF	NO	14117
	_	_		NO.	IOFF	14117
	_	_		IOFF	NO.	_
	_			2 5	OFF	_
	_				N G	1411/
				200	100	
				2 2	0 O	
			-	IOFF	0	
		_		ON I	IYES	14117
		-		WAIT	RUN	14117
	3740	10	HI EXP MAIN BUS CURRENT		_	14117
2396	_	_	IEXP MAIN BUS VOLTAGE OOL	_	_	14117
	1 819	16	IFEA LOWER	_	_	14117
	_			_	_	_
887	_	_	IFEA PRESSURE 1	_	_	
887	_	16	IFEA PRESSURE 2	_	_	4117
	1 2035	5.1	LOWER ATMOS	_	_	4117
	1 2035	51	UPPER ATMOS TEMP	_	_	14117
	1 585	- 2				
	1 907	ار ً		_		411
	907	17	HI CLD END SHELL TEMP			411/
	1 907	17	REM WATE			_
	1 2007	7.	HI STEP MTR PHASE A CURRENT	_	_	14117
	1 2163	31	STEP MTR PHASE A	_	_	14117
	1 2007	7.1	STEP MTR PHASE B	_	_	
	2163	31	STEP	_	_	14117
	1067	1,	HI FTS STEPPER MOTOR TEMP	_		14117
	1 3003	31	HI COLD GUARD HTR CURRENT	_	_	14117
	1536	<u> </u> 9	HI COLD GUARD HTR VOLTAGE	_	_	14117
	1 3003	31	HI COLD PRIM HTR CURRENT	_	_	14117
-	-	-		) ) ) ) )		
7	2	3 3	9	1	7	8
0	80	8 9	9	2	6	1 3

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 6 of 14)

ILE   UPPER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER   LOWER	F IC NI	WARNING VALUES (YELLOW LINE)	S   CRITICAL VALUES	VALUES 1		i IDI STATE			
TEE UPPER   LOWER   LOWER   LOWER     Col.   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower	2 X	-	-		EXCEPTION MONITOR MESSAGE		t	1 2	7 =
I	9	· — ·		LOWER		=0	]=		<del>-</del> -
STATE			I LIMIT I	ו יישורטים אר					-
1536				STATE					-
1536    1536    HI COLD RED HTR VOLTAGE   1536    HI COLD RED HTR VOLTAGE   1536    HI COLD RED HTR VOLTAGE   1536    HI COLD RED HTR VOLTAGE   1536    HI HOT GUARD HTR VOLTAGE   1536    HI HOT GUARD HTR VOLTAGE   1536    HI HOT GUARD HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI HOT PRIM HTR VOLTAGE   1536    HI CJ TEMP - COLD ZONE   1237    HI CJ TEMP - HOT ZONE   1237    HI CJ TEMP - HOT ZONE   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE   SENSOR   1237    HI CJ TEMP - SAMPLE		- 1					-	. 41.	1 =
1303  1303  141 COLD RED HTR CURRENT   1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1536  1	1118501LS	15361	1536	<b>=</b> :	COLD				
1536    1536    1536    111 GOODS THE VOLTAGE   1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536    1536		3003	3003	Ξ:	COLD			7.	
HI BOOST HTR CURRENT   1903   11 BOOST HTR CURRENT   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   1903   190	1318501LS1	1536	15361	<b>=</b>	COLD RED HTR				- ;
BADOLES   30072   10072   11H BOOST HTR VOLTAGE   1536   11H HOT CUARD HTR CURRENT   1536   11H HOT CUARD HTR CURRENT   1536   11H HOT PRIM HTR CURRENT   1536   11H HOT PRIM HTR CURRENT   1536   13003   13003   11H HOT PRIM HTR VOLTAGE   1536   11H HOT PRIM HTR VOLTAGE   153012   3003   13002   11H HOT RED HTR VOLTAGE   153012   13003   14H HOT RED HTR VOLTAGE   153012   13003   14H HOT RED HTR VOLTAGE   153012   13003   14H CJ TEMP - COLD ZONE #1   145012   145012   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   14103   1410	27418501LS1	30031	1 3003	Ξ	BOOST HTR				= 7
BADOLLS   3003   13063   111 HOT COARD HTR CURRENT   1536   111 HOT COARD HTR VOLTAGE   1536   111 HOT COARD HTR VOLTAGE   1536   111 HOT COARD HTR VOLTAGE   15301   13003   13003   13003   13003   13003   13003   141 HOT RED HTR CURRENT   15501   141 HOT RED HTR CURRENT   15501   15001   141 HOT RED HTR VOLTAGE   15501   15001   141 HOT RED HTR VOLTAGE   15001   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141 HOT RED HTR VOLTAGE   15001   141	275   850   LS	30721	1 30721	Ξ	BOOS				_ ;
BADOLIS   1536    1536    HI HOT ROLPAGE   1   1   1   1   1   1   1   1   1	27618501LS1	30031	1 30031	Ξ.	HOT	_			= ;
HI HOT PRIM HTR VOLTAGE   1903    HI HOT RED HTR VOLTAGE   19072    HI HOT RED HTR VOLTAGE   19072    HI HOT RED HTR VOLTAGE   1907    HI HOT RED HTR VOLTAGE   1907    HI HOT RED HTR VOLTAGE   1907    HI LOJ TEMP - COLD ZONE #1   1907    HI LOJ TEMP - COLD ZONE #2   1907    HI LOJ TEMP - HOT ZONE #2   1907    HI LOJ TEMP - HOT ZONE #2   1907    HI LOJ TEMP - HOT ZONE #2   1907    HI LOJ TEMP - SAMPLE 1 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 2 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 3 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 4 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 4 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 5 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6 SENSOR 1   1907    HI LOJ TEMP - SAMPLE 6	17718501LS1	15361	1536	Ξ.	HOT			= :	- 7
Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harring   Harr	27818501LS1	30031	1 30031	<u>=</u>	HOT			= :	7
HI HOT RED HTR CURRENT   1903    HI HOT RED HTR CURRENT   1907    HI HOT RED HTR VOLTAGE   1907    HI HOT TEMP - COLD ZONE   12   1907    HI CJ TEMP - COLD ZONE   12   1907    HI CJ TEMP - COLD ZONE   12   1907    HI CJ TEMP - HOT ZONE   12   1907    HI CJ TEMP - HOT ZONE   12   1907    HI CJ TEMP - SAMPLE   1 SENSOR   1   1907    HI CJ TEMP - SAMPLE   2 SENSOR   1   1907    HI CJ TEMP - SAMPLE   2 SENSOR   1   1907    HI CJ TEMP - SAMPLE   2 SENSOR   1   1907    HI CJ TEMP - SAMPLE   3 SENSOR   1   1907    HI CJ TEMP - SAMPLE   3 SENSOR   1   1907    HI CJ TEMP - SAMPLE   3 SENSOR   1   1907    HI CJ TEMP - SAMPLE   3 SENSOR   1   1907    HI CJ TEMP - SAMPLE   3 SENSOR   1   1907    HI CJ TEMP - SAMPLE   3 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1907    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    HI CJ TEMP - SAMPLE   5 SENSOR   1   1007    H	131958167	30721	1 30721	Ξ	HOT				7
B	18018501LS1	30031	1 30031	王	HOT	_	_		= ;
Hart Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Hea	181   850   LS	30721	1 30721	Ξ	HOT RED HT	_		-	= ;
BSOILS    B27    907	282   850   LS	8271	1 907	Ξ	CJ TEMP - COLD	_		41	= ;
B	83   850   LS	8271	1 907	Ξ	CJ TEMP - COLD			411	= ;
Hart Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Heat Color   Hea	284   850   LS	8271	1706	Ξ	CJ TEMP - HOT ZONE	_	_	41	=;
HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAMPLE   SENSOR   HI CJ TEMP-SAM	85   850   LS	8271	1 907	Ξ.	CJ TEMP - HOT ZON		_	41	= ;
Hart Color Temp-Sample   Sensor 2	186   850   LS	8271	1706 1	Ξ	CJ TEMP-SAMPLE 1	_	_	4	7
Hart   1   1   1   1   1   1   1   1   1	28718501LS	1728	1 907	Ξ	CJ TEMP-SAMPLE 1	~ :			= ;
Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   Harton   H	88 8 8 9 0 1 1 2	1 827 1	1206	<u>=</u> :	CJ TEMP-SAMPLE Z SENSOR	- :			
Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart   Hart	18318201F2	8271	1,06	<u>=</u> ;	CJ TEMP-SAMPLE Z SENSOR	<del>.</del> .			
Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Harth   Hart	53018201T21	9271	1 907	<u> </u>	CJ TEMP-SAMPLE 3 SENSOR			7 7	
B50   LS   B27   907   H1 CJ TEMP-SAMPLE   SENSOR 2   1   1   1   1   1   1   1   1   1		8271	1/06	= :	CO TEMP-SAMPLE 3 SENSOR			7	
B50 LS    B27    907    HI CJ TEMP-SAMPLE   SENSOR 2    907    HI CJ TEMP-SAMPLE   SENSOR 2    907    HI CJ TEMP-SAMPLE   SENSOR 2    907    HI CJ TEMP-SAMPLE   SENSOR 2    907    HI CJ TEMP-SAMPLE   SENSOR 2    907    HI CJ TEMP-SAMPLE   SENSOR 2    907    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    950    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   SENSOR 2    HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   HI CJ TEMP-SAMPLE   HI CJ TEMP-SAM	592   850   LS	8271	1/06	= :	CJ TEMP-SAMPLE 4 SENSON				
No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   1   No   No	593   850   LS	827	1/06	= :	CJ TEMP-SAMPLE 4 SENSOR				
B   B   B   B   B   B   B   B   B   B	294 850 LS	827	1/06	_ :	CJ TEMP-SAMPLE J SENSON				
S   S   S   S   S   S   S   S   S   S	59518501LS	8271	1/06	= =	CJ TEMP-SAMPLE 3 SENSOR				
SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    SOULS    S	59618501LS	827	1/06	= :	CO TEMP-SAMPLE 6 SENSOR				
HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI SEM TRACK TEMP   HI S	297   850   LS	1 8271	1/06	<u></u>	CJ TEMP-SAMPLE & SENSOR				
850 LS  827    907    HI SEM TRACK TEMP   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO  YES   NO	313   850   LS	1 9871	17221	<del></del>	ALIGN ARM		<b>-</b> .		
8501   1   1   1   1   1   1   1   1   1	31418501LS	8271	1 907	=	SEM TRACK	_ :	_ :	1 .	- 6
8501   1   1   1   1   1   1   1   1   1	465   850	_	_	_		0 <u>N</u>	YES	-	~ (
850	46618501	_	_	_		0 N	YES	4	- 1
850		_	_	_		ONI	IYES		Ξ
- 0 0		· –	_	-		ONI	IYES	_	_
0 1 2 - 2 - 2		-			1	-		_	! -
7 0	- c			- m		_	, -	89 ~	8
	<b>)</b>	• •		i ca	9	2	·	-	T

IN CON	Z C	WARNING VALUES	ARNING VALUES	CRITICA	CRITICAL VALUES		101	TATE CODE	1///1
<u> </u>	7								
×	N.		_	_	_	EXCEPTION MONITOR MESSAGE		_	E T
- B - S - S - S - S - S - S - S - S - S	E	UPPER	LOWER	1 UPPER	LOWER		=0 	<u></u>	
 		11617	11211	11017	EXPECTED!				
_	~		_	_	STATE		_	-	_
146918501	-			_			• 0N -	IYES	141171
148918501	_			_	_		<u>IOK</u>	FAIL	141171
149018501	_		_	_			<u>S</u>	FAIL	14117
149118501	_		_	_	-		OK	FAIL	141171
149218501	_		_	_	_		ÖK	FAIL	_
1493 850	_		_	_	_		<u>×</u>	FAIL	14117
149418501	_		_	_	<b>-</b>		<u>×</u>	FAIL	141171
1495   850	_		_	_	<del>-</del>		<u>×</u>	FAIL	141171
149618501	_		_	_	<del>-</del>		<u>%</u>	FAIL	141171
149718501	_		_	_	_		<u>8</u>	FAIL	
149818501	_		_	_	_		<u>8</u>	FAIL	141171
149918501	-		_	_	<b>-</b> -		<u>8</u>	FAIL	141171
120018201	_			_	_		<u>  0</u>	FAIL	141171
501   850	_		• _	_	_		<u>8</u>	FAIL	
1502   850	-			_	<del>-</del>		Š	FAIL	4117
150318501	_			_	_		<u>8</u>	FAIL	141171
150418501	_		_	_	_		<u>X</u>	FAIL	141171
120218201	_			_	<b>-</b>		<u>  0</u>	FAIL	141171
120618501	_			_	_		<u>o</u> K	FAIL	141171
150718501	_		_	_	_		<u>S</u>	FAIL	14117
120818201	_		_	_	_		<u>ok</u>	FAIL	141171
120918201	_		_	_	<del></del>		<u>o</u> K	FAIL	14117
151018501	_		_	_	_		<u>×</u>	FAIL	141171
151118501	_		_	_	<u>-</u>		<u>o</u> K	FAIL	141171
1512   850	_		_	_	<b></b>		<u>×</u>	FAIL	141171
151318501	-		_	_	_		<u>8</u>	FAIL	141171
1514   850	_		_	_			<u>ok</u>	FAIL	141171
151518501	_		_	_	_		OK OK	FAIL	141171
151618501	_		_	_	_		OK	FAIL	141171
1517   850	_		_	_	_		OK	FAIL	141171
151818501	_		_	_		-	OK	FAIL	141171
1519 850	_		_	_	_		š	FAIL	14117
152018501	-		_	_	_		OK	FAIL	141171
	!	-	-	-			-	-	-
			٠ ,	٠ ،	سم . سم .	- 14	٠,	,	- α - α
o 14		, (	₩ С	ν α	ים יים	2	- c	- 0	o -
		7	>	D		٥	7	ν.	٠ -

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 8 of 14)

IE NIO OIMT	! <i> !</i>	WARNING VALUES (YELLOW LINE)	CRITICAL VAL	CRITICAL VALUES   (RED LINE)		l IDI ST	STATE CODE////	1////
 : ::	<u>'</u> –	-	; ; ; ; ;		EXCEPTION MONITOR MESSAGE		-	- <u>-</u> =
IR BI LIE	EI UPPER	1 LOWER	I UPPER	I LOWER !		=0		X
- <del>-</del>				LIELLIA				
- IR	-	-		STATE		_	. –	ID E
	_	_	-			LOK	FAIL	141171
152218501	_	_	_	_		OK	FAIL	141171
1523   850	_	_	_	_		lo <del>k</del>	FAIL	141171
1524 18501	_			_		OK	FAIL	
1525 18501						Š	FAIL	41171
1527   850						ok Ok	FAIL	141171
1528   850	_		_	_		o.	FAIL	141171
152918501	_	_				lok	FAIL	141171
153018501	_	_	_	<del>-</del>		lok	FAIL	
	_	_	_			lok	FAIL	141171
				_		IOK	FAIL	141171
103818861						• X	FAIL	141171
1034 800		<b>.</b> -				ok OK	FAIL	
153618501						<u> </u>	FAIL	1411/1
1537   850	_	· <del>_</del>		-		Ŏ	FAIL	
153818501	_	_		. <del>-</del>		ě Š	FAIL	4117
1539   850	_	_		_	•	lok	FAIL	141171
1540   850	_	_		_		lok	FAIL	_
1541 [850]		_	_	_		IOK	FAIL	141171
	_	_	_	_		lok	IFAIL	141171
	_	_	_	_		lok	FAIL	141171
1544   850	_		_			lok	FAIL	141171
154518501				_		OK	FAIL	
1046   850			_			OK	FAIL	
				_		Š.	FAIL	
1548   850	<b></b> .	_	_	_		OK OK	FAIL	14117
154918501	_	_	_	_		OK	FAIL	141171
155018501	_	_	_	_		OK	FAIL	141171
	_	<b>-</b>	_			OK	FAIL	14117
_	_	_	_	_		OK OK	IFAIL	141171
155318501	- :	- 1	_	<del>-</del>		OK	FAIL	141171
-	_	-	-	_		-	-	-
0 0	1	7	2	3 3	9	1.	7	8
3 5	2	0	<b>∞</b>	8 9	9	7	6	1 3

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 9 of 14)

I IC N	WARNING VALUES	VALUES	CRITICA	CRITICAL VALUES 1		_ :		1///
<u>0</u>	(YELLOW LINE)	LINE)	I (RED	(RED LINE)		TS 101	UI STATE COUE   / / / /	
IN UIR IOYI		1 1 1 1 1 1 1			STATEMENT WOMEN		<u> </u>	[a
IT MIR INP	_	_	_	- ·	EXCEPTION MONITOR MESSAGE		<u>-</u>	
_	I UPPER	LOWER	UPPER	LOWER		5 	: 	
<u> </u>	LIMIT	LIMIT	LIMIT	LIMIT/				_
- R -	_	_	_	EXPECTED				
_  <del>K</del>	_	_	_	STATE				- ¦
155418501						IOK	FAIL	141171
155518501		_		_		OK	FAIL	141171
10301757				_		OK	FAIL	141171
102010201			. –	. –		OK	FAIL	
	_ ~					OK OK	FAIL	141171
102818201			_	-		<u>Io</u> K	FAIL	
156018501				_		<u>8</u>	FAIL	14117
105010051				_		<u>0</u>	FAIL	
100011001			_	_		<u>×</u>	FAIL	
100017901						NO.	FAIL	141171
1008   600					•	OK	FAIL	141171
156418501			- 			š	FAIL	141171
196816961			<u>-</u> -			ŏ	FAIL	141171
106819961		<u>.</u>				OK	FAIL	141171
156718501						ö	FAIL	141171
126818501						Š	FAIL	141171
156918501	_					ž	FAIL	141171
157018501						ŏ	FAIL	141171
571   850	_					XO	FAIL	14117
157218501						ŏ	FAIL	141171
15/3/8501						ŏ	FAIL	141171
100814761						ŏ	FAIL	141171
1008 075						XO.	FAIL	141171
100819701					_	XO.	FAIL	141171
10001/10			· 		_	XO	FAIL	141171
105010251						OK	FAIL	14117
10016/6						<u>o</u>	FAIL	41 7
100010001						OK	FAIL	141171
19811830					_	š	FAIL	141171
128218201						Š	FAIL	141171
158318501	_	<b>-</b> .	_			Š	FAIL	141171
158418501	_	_				Š	FAIL	141171
128218201	_					ž	IFAII.	14117
128618501	_	_		-		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
-	-		_	-	_			
- c		5	2	3 3	9	7		æ æ
, u	٠ ر	· C	œ	8 9	9	2	6	_
ח	7	>	>	,				

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 10 of 14)

2	WARNING	VALUES	CRITICAL	L VALUES		-		1////
E N O O MT	(YELLO	(YELLOW LINE)	(KED	(KED LINE)		101 ST	STATE CODE	CODE   / / /
Σ Σ <u>Σ</u>	; ; ; ; ; ; ; ; ;	_			EXCEPTION MONITOR MESSAGE		-	ω <u></u>
IR BI IIE	UPPER	LOWER	I UPPER	LOWER		* 0	<u>.</u> 	X A
	11617			EXPECTED				
. –		. =-		STATE		· <b>_</b>		
158718501			-			OK	FAIL	141171
158818501		_		_		lok	FAIL	141171
				_		NOI	FAIL	141171
159018501		_	_	_		lok	FAIL	141171
159118501		_	_	_		YO	FAIL	141171
159218501		_	_	_		lok	FAIL	141171
159318501			_	_		lok	FAIL	141171
159418501		-	_	_		OK	FAIL	141171
159518501		_	_			10K	FAIL	141171
129618501	_	_	_			lok	FAIL	141171
		_	_	_		lok	FAIL	141171
129818501		_	-	_		ЮK	FAIL	
159918501		_	_	_		ЮК	FAIL	
105810091	_	_	_	_		IOK	FAIL	14117
160118501		_	_	_		OK	FAIL	41 7
	_	_	_	_		OK	FAIL	
	_	_	_			10K	FAIL	
160418501	_	_	_	_		N N	FAIL	
105815091	_	_	_	_		<u>o</u>	FAIL	141171
105819091		_	_	_		lok	FAIL	141171
105817091	_	_	-	_		OK	FAIL	141171
105818091		_	_	_		lok	FAIL	141171
105816091		_	_	_		<u> 0</u>	FAIL	141171
1610   850	_	_	_	_		<u>0</u> K	FAIL	
161118501	_	_	_	_		<u>0</u>	FAIL	141171
161218501	_		_	_		<u>c</u>	FAIL	
1613   850	_	_	_	_		<u>0</u>	FAIL	141171
1614   850	_	_	_	_		OK	FAIL	141171
161518501	_	_	_	_		OK	FAIL	141171
161618501	_	_	_	_		OK	FAIL	141171
161718501		_	_	_		OK	FAIL	141171
161818501	_	_	_	_		<u>o</u> K	FAIL	141171
161918501	_	_	_	-		IOK	FAIL	141171
-		-	-			-		
- 0		- 2	. ~	- m	. 9	. ۴	,	- co
)	٠		1 00	9 00	, 49	2	ு	
n n	7	>	>		,	1	`	1

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 11 of 14)

NR   NP   NP   NP   NP   NP   NP   NP	IC NI I	WARNING VALUES (YELLOW LINE)	ARNING VALUES (YELLOW LINE)	CRITICA (RED	CRITICAL VALUES   (RED LINE)		i IDI S <b>T</b>	///   DI SȚATE CODE ////	
The paper   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower   Lower			1						
TE   UPPER   LOWER   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT   LIMIT	_		-	_		EXCEPTION MONITOR MESSAGE			
10		UPPER	LOWER	LIMIT	LIMIT/		- 	<u>.</u> 	
R	_			-	EXPECTED		_	_	_
Second	_		_	_	STATE		_	_	_ ;
10	1 18501	1	-	: : : -			T OK	FAIL	141171
OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   OK   OK   OK   OK   OK   OK   O	105811						ŏ	FAIL	_
SSO	2218501			_			Š	FAIL	-
S	318501						<u> </u>	FAIL	-
Second   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Contr	418501			_	_		NO.	FAIL	_
Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   S	625   850		_	_	_		<u>8</u>	FAIL	_
Second	62618501		_	_	_		OK	FAIL	_
SSO	62718501		_	_	_		<u>  0</u>	FAIL	_
SSO	628 850		_	_	_		<u>  0</u>	FAIL	141171
OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   OK   FAIL   OK   OK   FAIL   OK   OK   OK   OK   OK   OK   OK   O	629 850		_	_	_		<u>8</u>	FAIL	141171
100   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164   164	63018501		_	_	_		×	FAIL	
DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL   DOK   FAIL	631 850		_		- -		<del>Š</del>	FAIL	
OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   OK   FAIL   OK   OK   OK   OK   OK   OK   OK   O	3218501 1		_	_	_		<u>×</u>	FAIL	
850	63318501		_	_	_		<u></u>	FAIL	41-
OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   FAIL   OK   OK   FAIL   OK   OK   FAIL   OK   OK   OK   OK   OK   OK   OK   O	34   850	_	_	_	_		Š	FAIL	4117
S	1058156	_	_				<u> </u>	FAIL	411/1
8501	1058198						<u> </u>	FAIL	14117
1	1000110						ŏ	FAIL	
1	1058161				-		<u>8</u>	FAIL	141171
FAIL   FAIL	1018201				-		OK	FAIL	
FAIL   FAIL	1118501	_	_	_	_		l OK	FAIL	14117
1	1218501	_	_	_	_		Š	FAIL	14117
1	1318501	_	_	_	_		Š	FAIL	141171
1	64418501	_	_	_	_		<u>×</u>	FAIL	41 7
850	1518501	_	_	_	_		<u>8</u>	FAIL	14117
850	64618501	_	_	_	_		<u>8</u>	FAIL	41 7
1   1   1   1   1   1   1   1   1   1	64718501 1	_	_	_	_		<u>8</u>	FAIL	4117
850	64818501	_	_	_	_		<u>8</u>	FAIL	41171
1	64918501	_	_	_	_		OK	FAIL	14117
	10581059	_	_	_	_		Š	FAIL	41 7
		_	_	_	<u>-</u>		Š	FAIL	42 7
		_		_	-		NO.	FAIL	41 7
0 1 2 2 3 3 6 7 7 8 5 8 5 7 7 8 7 8 9 1 7 8 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9		-	-	-			-	_	-
5 2 0 8 68			2	7	33	9	7	7	æ
		, (	C	œ	90	9	2	6	1 3

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 12 of 14)

2	WARNING VALUES	VALUES	CRITICA	CRITICAL VALUES		<u> </u>	 	
N UIR LOY	(YELLOW LINE)	W LINE)	I (RED	(RED LINE)		lor s1	STATE CODE 1////	B1////I
<u>Σ</u>		_			EXCEPTION MONITOR MESSACE	<u> </u> 	-	7
- - - -	UPPER	LOWER	UPPER	LOWER				= =
	LIMIT	LIMIT	LIMIT	LIMIT/		- –		
- R-	_	_	_	EXPECTED				
- x-	-	_	_	STATE				10 E
165318501	_			-	;	707		1 -
165418501						5 5	FAIL	1411/1
165518501						5 3	FAIL	1411/1
165618501	-					ŠČ	FAIL	141171
165718501	_					<u> </u>	FAIL	1
165818501	_					Š Š	FAIL	1411/1
165918501	-					5 5	FAIL	
166018501	_					5 5	FAIL	
166118501	_					5 5	FAIL	141
166218501						5 5	TEWIT	1,11,1
166318501	_					5 5	FAIL	1111
166418501	-					N 0	FAIL	1411/1
105815991	-		_			5 5	FAIL	
166618501	-					<u>5</u>	FAIL	4117
166718501						<u> </u>	FAIL	14117
166818501	_					Š	FAIL	141171
166918501	-					<u>*</u>	FAIL	1411/1
167018501						<u>ŏ</u>	FAIL	141171
167118501	-		_			<u> </u>	FAIL	1411/
167218501	-					<u>×</u>	FAIL	4117
1673   850	_					Š	FAIL	141171
167418501	-					<u>x</u> 3	FAIL	41171
167518501	_					2 2	FAIL	1411/1
167618501	-					ŠŠ	FAIL	1411/1
167718501	-		_			2 2	11411	141
167818501	_			· -		5 5	TLWIT	1411/1
	_	_	_	_		10	TEALL	1717
168018501	_	_	_			5 5	FAIL	7117
168118501			_					1/1761
	-	-	_			Š	FAIL	4117
168318501	-	-	_			<u>5</u>	FAIL	1411/1
		-				<u>*</u>	FAIL	141   7
168518501	-		_			o S	FAIL	141171
		-   		-		Š	FAIL	141171
_ _	_	-	-	<del>-</del>	-	;	-	
0 0	-	7	2	3.3	. 19	. ~	- '	- a
3 5	7	0	<b>6</b> 0	8 9	1 4	٠,	•	) c
					,		•	_

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 13 of 14)

	WARNING VALUES	VALUES	CRITICA	CRITICAL VALUES		1 101 ST		1///1
OOIN	(YELLO	(YELLOW LINE)	I (RED	LINE		1 1 1	1	_
_	1 1 1 1 1 1		; !!!!!!!!!		EXCEPTION MONITOR MESSAGE	_	_	IE ITI
<u>~</u>		-	-			=0 	_ 	_
_ 	UPPER	LOWER	I UPPER	LOWER .		_	_	18 181
<u>_</u>	LIMIT	LIMIT	I I E I I	Trans.		_	_	_
N .				STATE		_	_	13) QI
× -		-	-		, , , , , , , , , , , , , , , , , , , ,	1 1 2 2 2		121171
105013031	_	_	_	_		5	1141	1 1 1 1 1
10001000				_		ŏ	FAIL	1 1 1 1
105811891	_					OK	FAIL	41 /
168818501	_	_				lok	FAIL	141171
105816891	_	_	_			<u>S</u>	FAIL	141171
105810691	_	_	_	_		Se	FAIL	141171
169118501	_	_	_	_		X	FAIL	141171
169218501	_	_	_			×	FAIL	141171
169318501		_	_	_		ž	FAIL	141171
169418501	_	_	_	_		<u> </u>	FAII	141171
169518501		_	_	_	_	2 2	1143	141171
105815691	_		_	_	_	2 0	FAIL	141171
102010201		_	-	_	_	X S	FAIL	
00011691					_	OK	FAIL	
100818691						OK	FAIL	1411/1
100816691					-	ō Š	FAIL	411/1
10018201	_					OK	FAIL	141171
170118501		_				No	FAIL	141171
170218501	_	_				10K	FAIL	14117
170318501	_					OK	(FAIL	_
170418501	_	_				NO.	FAIL	141171
170518501	_		_			<u>X</u>	FAIL	141171
10618501	_	_				OK	FAIL	141171
102817071	_	-				IOK	FAIL	141171
1 708 1850 1	_	_	_			OK	FAIL	141171
10081601	_	_	_			OK	FAIL	141171
171018501	_	_	_			ÖK	FAIL	141171
171118501	_	_	_			ÖK	FAIL	141171
171218501	_	_	-			X	FAIL	141171
171318501	_	_	_	_		Š	IFAIL	141171
171418501	_	_	_	_		ž	FAIL	141171
171518501	_	_	_	-	'	×	IFATI.	141171
171618501		_	_	_	_	5	FAIL	141171
171718501	_	_	_	_		5 5	FAIL	141171
1718   850	_	-	-	_		10		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						_		<del>-</del> -
_		- 1	- c	- ~		. 9		7 8 8
0	→ ·	7	<b>v</b> 0	, 4		5 2		9 1 3
3 5	7	0	æ	0				

TABLE 2.7-5. POIC LIMIT SENSING/EXCEPTION MONITOR REQUIREMENTS (Sheet 14 of 14)

2	WARNING VALUES	VALUES	CRITICA	CRITICAL VALUES		-	////I	
E NIO OIMT	(YELLOW LINE)	( LINE)	(RED	(KED LINE)			AIE CODE	
Σ Σ	-				EXCEPTION MONITOR MESSAGE		_	
<u>a</u>	UPPER	LOWER	I UPPER	LOWER		= 0	<u>.</u>	X
<u> </u>	TIETT	LIMIT		FXPECTED!				
	- <b>-</b>			STATE			_	13 O
171918501	-		-		.	10K	FAIL	141171
172018501	_			· <del>-</del>		ŏ	FAIL	141171
1721   850	_		_	. <del>-</del>		lok	FAIL	141171
172218501	-		_	_		lok	FAIL	141171
			_	_		ЮК	FAIL	141171
172418501	_	_	_	_		OK	FAIL	141171
172518501		_	_	_		o k	FAIL	
172618501						Š	FAIL	411/1
10581/2/1						<u> </u>	IFAIL.	
1058187/1						žž	FAIL	_
				_		OK	FAIL	141171
			. <del>_</del>	_		lok	FAIL	141171
173218501		_	_	_		<u>lok</u>	FAIL	141171
		-	_	_		ŏ.	FAIL	141171
						ž č	FAIL	111/1
173518501						ŠČ	FAIL	1411/1
105819871						ž č	FAIL	
173818501						o XO	FAIL	141171
173918501			-	- - -		lok	FAIL	141171
740   850				_		lok	FAIL	141171
1741   850		_	•-	_		lok	FAIL	141171
174218501		_	_	_		<u>  0</u>	FAIL	41171
174318501		_	_	_		X :	FAIL	41171
1744   850		_				<u> </u>	FAIL	1411/1
1/45/8501						2 2	FAIL	14117
1068108/1						X	FAIL	14117
174818501				_		OK .	FAIL	141171
174918501						lok Iok	FAIL	141171
175018501				_		lok	FAIL	141171
1264   851		_	_	_		NON!	IMAIT	142171
126618511	_	_	_	_		ON	IXES	14217
	-	-				-	-	- -
0		7	7	е В	9	7	7	8
. s	2	0	8	9 9	9	2	6	1 3

			$\sim$
			$\smile$

### 2.8. FLIGHT SOFTWARE REQUIREMENTS

This section of the Experiment/Facility Requirements Document (E/FRD) defines the Space Station Furnace Facility (SSFF) Data Management System (DMS) software functions required to support the Furnace Module-1. Furnace Module-1 will require the SSFF Furnace Control Unit (FCU) and Furnace Actuator Unit (FAU) software to provide networking, data processing, storage and data acquisition and control for Furnace Module-1. The following subsections define the required resources and data handling requirements of Furnace Module-1.

### 2.8.1 COMMAND SUPPORT

The SSFF software will support the issuance of commands by the Furnace Module-1 application software or commands issued by Tier 1 or the SSFF Core Control Unit (CCU).

#### 2.8.2 DATA ACQUISITION

The SSFF software will support the acquisition of the Furnace Module-1 data defined in Section 2.7 of this E/FRD.

#### 2.8.3 DATA PROCESSING

The SSFF software shall support limited processing of Furnace Module-1 data defined in Section 2.7 of this E/FRD.

### 2.8.4 DATA ROUTING/FORMATTING

The SSFF software shall support formatting and routing of Furnace Module-1 data, defined in Section 2.7 of this E/FRD, to the SSFF CCU.

### 2.8.5 <u>DOWNLOADING APPLICATION SOFTWARE AND DATA</u>

The SSFF software shall support downloading of Furnace Module-1 application software and data.

### 2.8.6 <u>DOWNLOADING ANCILLARY DATA</u>

The SSFF software shall support the retrieval and downloading of ancillary data to the Furnace Module-1 application software.

#### 2.8.7 FDIR SUPPORT

The SSFF software small provide fault detection, isolation, and recovery (FDIR) support for Furnace Module-1.

## 2.8.8 OPERATING SYSTEM SERVICES

The SSFF software shall provide operating system services for the Furnace Module-1 application software.

### 2.8.9 HEALTH AND STATUS DATA

The SSFF shall acquire health and status data from the Furnace Module-1 application software for SSFF storage or transfer to the SSF.

### 2.9. PHYSICAL INTEGRATION

This section describes the Furnace Module-1 integration/deintegration requirements and flow. Figure 2.9-1 illustrates the Furnace Module-1 physical integration activity flow from the beginning of prelaunch site activities, through deintegration after return from space.

Table 2.9-1 provides the integration facility requirements for each stage of integration. Table 2.9-2 describes the requirements and activities at each step of the integration process.

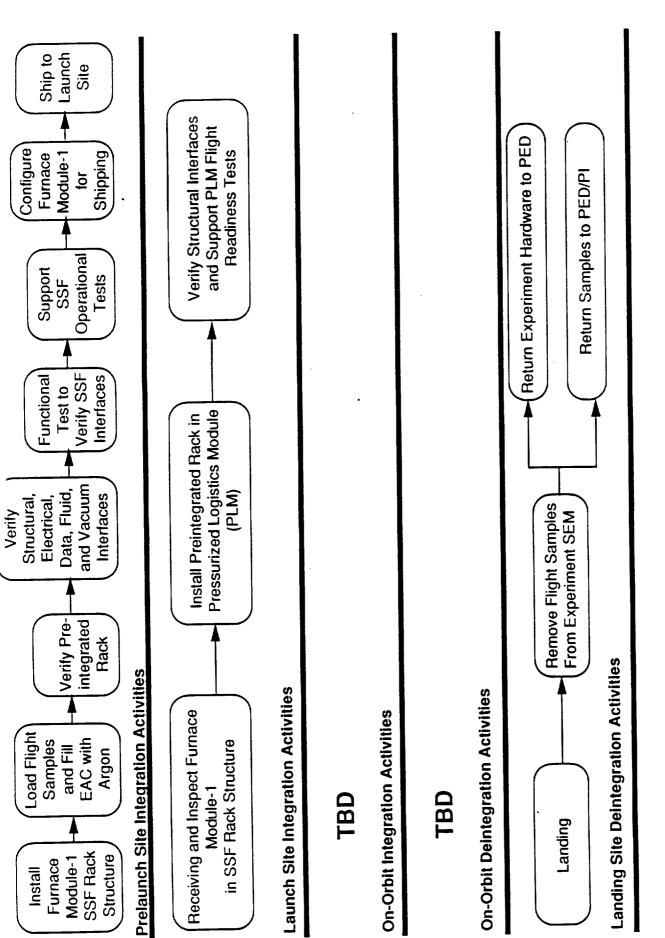


FIGURE 2.9-1. PHYSICAL INTEGRATION FLOW

## TABLE 2.9-1. FURNACE MODULE-1 GROUND PROCESSING REQUIREMENTS (Sheet 1 of 2)

<ul> <li>( √ ) Experiment/Facility Preintegration</li> <li>( ) Experiment/Facility Preparation</li> <li>( ) Postmission Requirements</li> </ul>
Description of Planned Activities:
Functional tests, sample loading, and closeout will be performed after the EAC is mounted on the rotation fixture.
Total Floor Space Required Including Space for GSE: 2000 ft ²
Ceiling Height Required: 10 ft
Overhead Crane Required: Yes No Hook Height _8 ft
Facility Power Required: 120 V, 1 F, 60 Hz 208 V, 3 F, 60 Hz Other 220 V, Single Phase, 60 Hz
Other Facility Support: Gases  V GN2 Liquids Water  V GHe  Argon Other
Environment: Other Other
Hazardous Operations: Yes No
Total Anticipated Use Time: 21 Days
Other Facility Support Description:
Mass spectrometer leak test

# TABLE 2.9-1. FURNACE MODULE-1 GROUND PROCESSING REQUIREMENTS (Sheet 2 of 2)

<ul> <li>( √) Experiment/Facility Preintegration</li> <li>( ) Experiment/Facility Preparation</li> <li>( ) Postmission Requirements</li> </ul>
Description of Planned Activities:
Functional tests, sample loading, and closeout will be performed after the EAC is mounted on the rotation fixture.
Total Floor Space Required Including Space for GSE: 2000 ft ²
Celling Height Required: 10 ft
Overhead Crane Required: Yes No Hook Height _8 _ ft
Facility Power Required120 V, 1 F, 60 Hz208 V, 3 F, 60 HzOther 220 V, Single Phase, 60 Hz
Other Facility Support: Gases GN ₂ Liquids <u>Water</u> GHe
Environment Standard Other
Hazardous Operations: Yes√_ No
Total Anticipated Use Time: <u>3</u> Days
Other Facility Support Description:
Mass spectrometer leak test

### TABLE 2.9-2. FURNACE MODULE-1 INTEGRATION REQUIREMENTS

Description of Special Alignment, Calibration, Servicing, or Performance Verification and Estimated Time to Perform:
TBD
•
Identification of Any Constraints on Experiment/Facility Operations During Tests:
TBD
Description of Time-Critical Operations and Time Constraints:
TBD
·

						<u> </u>
•						
						$\sim$
		-		•		
	•					
					`	•
				-		
			•	•		
						_
						_

### 2.10. OPERATIONS SUPPORT

Table 2.10-1 describes the physical and operational support required at the Ground Science Operations Control Center, during flight of the Space Station Furnace Facility (SSFF). Specifically, this facility has been designated as the Payload Operations and Integration Center (POIC) by the Space Station Freedom (SSF) Program.

## TABLE 2.10-1. FURNACE MODULE-1 MISSION OPERATIONS SUPPORT

## COMMUNICATIONS REQUIREMENTS: Downlink Data Three terminals Uplink Commands/data Three terminals Voice Communications Access for three Video Real-time and recorded SUPPORT EQUIPMENT: Description **Dimensions Power Requirements** Data Interface REMOTE SITE INTERFACE Location Off-line room for three scientists with access to monitor voice, video, and data. Describe interfaces

#### 2.11. TRAINING OBJECTIVES

Presently, the training objectives are TO BE SUPPLIED. The following is a detailed generic explanation of the Integrated Requirements on Payloads (IROP) requirements.

Training required for a successful mission begins with the Principal Investigator (PI)/Payload Element Developer (PED) team identifying the training objectives for each task of the experiment. This section shall identify and describe training objectives, trainees, and instructors necessary for experiment operation. This section shall also identify the hardware and software trainers required to support flight-like training.

There are three categories of personnel who will require training to support the mission. Training objectives will be required for each category. These categories are:

- Crew
- POIC cadre
- PI/PED team

Table 2.11-1 identifies the major training objectives, the trainees, and the organizations responsible for developing and conducting required mission payload training. The Furnace Module-1 PED may develop and conduct the training or identify training to be provided by the Core facility PED and/or POIC training function.

The PI/PED team and the Payload Increment Manager (PIM) shall jointly define the training objectives for training at NASA facilities and for integrated training with other mission experiments.

The PIM shall define the increment-independent training objectives for the POIC cadre and will define the increment-independent training objectives for the crew and PI/PED team for training conducted at Marshall Space Flight Center (MSFC).

The PI/PED and PIM shall provide information detailing training objectives for each operational task. The requirements for a trainer and its fidelity shall also be specified. MSFC POIC will develop increment training requirements based on inputs from each payload flown on a specific increment.

### 2.11.1 <u>PVPED-DEFINED TRAINING</u>

The Furnace Module-1 (FM-1) PI/PED shall define the training objectives necessary for the crew to understand the required science to operate the furnace module to obtain science data. The FM-1 PI/PED shall also define training objectives required for the POIC cadre and the PIM support of experiment operations. The FM-1 PI/PED will specify the training equipment such as flight-like hardware or trainers required to support the training objectives. Table 2.11-2 will identify the equipment to be supplied by the PI/PED and the equipment requested to be furnished by the SSFP.

TABLE 2.11-1. TRAINING PARTICIPATION

Training Objectives	Trainee	Instructor
PI/PED defined Science Background/ Experiment Objectives	Crew Cadre	SSFF PI/PED
FM-1 Systems Familiarization	Crew Cadre	FM-1 PED
FM-1 Operations	Crew Cadre	FM-1 PED
PIM and PI/PED Jointly Define Experiment Proficiency Training		PI/PED, PTC
Integrated Training	Crew Cadre*	PI/PED, PTC
Simulations	Crew Cadre	PI/PED, PTC
PIM Defined Increment Independent	Crew Cadre	POIC
POIC Facility Training	Cadre	PI/PED, POIC

Limited cadre participation

320REQ0007

TABLE 2.11-2. FURNACE MODULE-1 TRAINING OBJECTIVES

															3.	20REQ0
	COMMENTS	Classroom	Instruction													
IRED	PROVIDER							FM-1 PVPED		-	FM-1 PVPED				FM-1 PVPFD	
REQU	N/S							YES			YES				YES	<del></del>
SIMULATOR REQUIRED	H/W	110001						В		•	æ				a	
S	YES/	8	ON .	<u>Q</u>	0	ON N		YES			YES				YES	
	LEVEL RESPONSIBLITY	FM-1 PVPED	FM-1 PVPED	FM-1 PVPED	FM-1 PVPED	FM-1 PVPED		FM-1 PVPED			FM-1 PVPED				FM-1 PVPED	
ועאנו	, , , , , , , , , , , , , , , , , , ,	c/a	c/a	c/a	c/a	c/a		b/a	·		b/a				b/a	
TRAINEC		Crew, cadre	Crew, cadre	Crew, cadre	Crew, cadre	Crew, cadre		Crew, cadre			Crew, cadre				Crew, cadre	
TRAINING OBJECTIVE	DESCRIPTION	SCIENCE BACKGROUND	FM-1 Science Basis and Significance	FM-1 Science Objectives	FM-1 Science Theory	FM-1 Experiment Operations Philosophy	FM-1 SYSTEMS FAMILIARIZATION	Hardware Rack location	Instrument Components Stowage locations FM-1 Command & Disolay	DMS Interfaces	Software DMS		Keyboard/MPAC/uplink	Timeline requirements	ection	Downlink
	NO.	1.0	<u>-</u>	1.2	1.3	1.4	2.0	2.1.	7. 9. 9. 7. 6. 4.			2.2.2		2.2.4		2.3.2

The PI/PED shall supply objectives for training in the following areas. Other areas may also be included.

- Science Background and Experiment Objectives Basis and significance of experiment, relationship to precursor experiments, specific objectives of experiment.
- Experiment Systems Familiarization (hardware and software) Hardware and software elements [both on-orbit and ground support equipment (GSE)] that constitute the experiment system.
- Experiment Operations (nominal, malfunction, in-flight maintenance) Hands-on training using breadboards, simulators, or flight hardware/software.

The knowledge and skill level for each operational task shall be identified. Tables 2.11-3 and 2.11-4 provide a means of coding the level of proficiency to which the student should be trained in order to accomplish the task. The information will also be used in developing course materials and training equipment.

## 2.11.2 PIM AND PIPED JOINTLY DEFINED TRAINING

The PIM and the PI/PED team will jointly define the following training objectives:

- Experiment Proficiency Training Repetitive exercise of specific experiment operations to develop and maintain operational skills at a flight readiness level.
- Integrated Training Repetitive exercise of selected portions of the integrated timeline conducted within a simulated mission operations environment and with onboard crew operations as its focus.
- Simulations Exercise of major portions of the integrated timeline conducted at the highest level of fidelity. Includes all payload elements and may include element of the SSF operations. Exercise crew, POIC cadre, PI/PED team, and SSF operations teams in nominal and contingency operations with emphasis on developing specific skills, strategies, and interactions.

Table 2.11-2 shall be completed using inputs provided by the PIM and PI/PED team. This information is normally obtained from the Increment Training Assessment Team (TAT). The TAT is composed of representatives from POIC, PIM, and PI/PED team who gather, review, and assess mission training needs. The TAT reviews mission documentation and obtains experiment operations and interface requirements for the PIs and from design reviews. It reviews available training equipment and assess the need for development of trainers by the PI/PED team or NASA to accomplish training objectives.

Experiment/PTC/POIC operational training interface needs such as data flow, power and thermal requirements, trainer control and display, and experiment GSE shall be identified in this paragraph.

TABLE 2.11-3. KNOWLEDGE LEVELS

CODE	TRAINEE WILL BE ABLE TO:
a	Recall nomenclature, simple facts, or simple procedures involved in the task or operation.
b	Determine step-by-step procedures for sets of tasks or operations or for accomplishing important decisions.
С	Explain why and when each task or operation must be done.
d	Predict, identify, and solve problems related to the task or operation.

TABLE 2.11-4. SKILL PROFICIENCY LEVELS

CODE	TRAINEE WILL BE ABLE TO:
1	Accomplish most task activities only by being told or shown how.
2	Accomplish most of the behaviors in task or activity, but not necessarily to
3	desired levels of speed or accuracy. Accomplish behaviors in a task or activity at minimum acceptable levels of speed or accuracy.
4	Accomplish all behaviors in an activity at highest levels of speed or accuracy and be able to tell or show others how to do the activities.

Note: This is not a design requirement, but an instrument to document training objectives that present an early need for training equipment and interfaces with the training facility.

### 2.11.3 PIM-DEFINED TRAINING

The PIM will define the following training objectives:

- Increment-Independent Training Includes training on SSF and payload support systems and subsystems that remain relatively constant from increment to increment. Examples are Data Management System (DMS), SSF overview, SSF Caution and Warning System, etc.
- POIC Facility Training Classroom and hands-on opportunities for training on specific POIC facilities such as Operations Management Information System (OMIS), communications protocols, and generic POIC procedures.

### 2.11.3.1 Increment-Independent Training - Crew

The increment-independent training for the crew on SSF systems and procedures shall be defined by Johnson Space Center (JSC) in JSC training documents and shall be provided at JSC/Kennedy Space Center (KSC).

Increment-independent training for the crew to support payload operations shall be defined by the PIM and provided at Marshall Space Flight Center (MSFC).

The training objectives, trainee responsibility, and any required training equipment shall be listed in Table 2.11-2.

### 2.11.3.2 <u>Increment-Independent Training - PI/PED Team</u>

The increment-independent training required for the PI/PED team to support the increment at MSFC is defined in this E/FRD. Trainee responsibility and required training equipment shall be listed in Table 2.11-2.

## 2.11.3.3 Increment-Independent Training - POIC Cadre

The increment-independent training required for the POIC cadre to support the increment is defined in the MSFC Increment-Independent Training Plan.

### 2.11.4 TRAINING SIMULATION

Experiment trainers will be developed by the PI/PED based upon analysis of training objectives, available training tools, existing trainers, and availability of training opportunities on flight hardware.

The FM-1 PI/PED shall participate in trainer development by identifying training needs in this document. The PI/PED shall provide detailed data inputs to the TAT and Payload Training

Requirement Document (PTRD) and shall participate in Payload Trainer design acceptance reviews.

Training objectives that require a trainer to accomplish the training task shall be listed in this paragraph outlining the overall desired capabilities.

### Examples:

Joystick Operation - Capable of interaction with control panel and trainer software.

Scene Generation - Capable of tracking any predefined target.

## 2.11.5 TRAINING PARTICIPATION

The PI/PED shall participate as instructor or trainee in formal training programs as outlined in Tables 2.11-1, 2.11-2, 2.11-3 and 2.11-4. Schedules and detailed objectives will be developed and maintained in the User Payload Training Plan (UPTP).

		<u> </u>
	•	
•		
	•	

## 2.12. ENVIRONMENTAL CONTAMINATION DATA REQUIREMENTS

Tables 2.12-1, 2.12-2, and 2.12-3 define the environmental contamination requirements for Furnace Module-1.

		SEN	SENSITIVITY LIMIT	IMIT	EXPE	RIMENT	EXPERIMENT GENERATED	\TED
	OPER	ATING	NONOP	OPERATING NONOPERATING	OPER	ATING	OPERATING NONOPERATING	RATING
	N	MAX	Ni	MAX	Z	MAX	MIN	MAX
SMETT E HIGGINGE	X X	Y N	N/A	N/A	0	0	0	0
CONTAMINATION MODOLL IT LIND A. PARTICULATE SIZE (μm), number/m ³ B. TRACE GASES (type & ppm)	ZZ ZZ	ĕĕ ZZ	ZZ AA	NA/N	0 -	0 '	0 1	o ·
peccipe (N/m ² )								
				•				

## TABLE 2.12-2. EXTERNAL CONTAMINATION SOURCES

Does experiment/facility release (vent, purge) any material overboard on orbit? Yes  $\sqrt{\phantom{a}}$  No

PARAMETER	DESCRIPTION
FOs of Occurrence	ALL
Frequency	TBD
Duration	TBD
Composition	Argon, Nitrogen, Air
Phase State (solid, liquid, or gas)	Gas
Quantity or Rate of Release	7 to 37 lbm*

^{*} Maximum, assumes active pressure control for four samples and one manual sample exchange.

## TABLE 2.12-3. ON-ORBIT EXTERNAL CONTAMINATION CONTROL SENSITIVITY

To understand and satisfy the on-orbit external contamination limits required by this experiment, please answer the following questions: NoX Yes□ Is the equipment subject to corona? 1. Are the experiment data affected by deposition of contaminants on sensitive 2. NoX Yes surfaces? If yes, then answer the following: Is the concern for deposition from particles, film/molecular, or both? What is the FOV for receiving deposition from return flux? What is the surface temperature of the sensitive element? What are the limits of deposition in terms of experiment effects (e.g., 10% degradation at 1400 Å)? List the FOs where deposition is a concern. Is a controllable cover provided for non-data-collecting periods? Is the experiment affected by induced contamination, such as water, CO2, 3. NoX Yes□ etc., in the FOV of the sensor? • If yes, then answer the following: - Is the concern for particles, molecular, or both? Breifly explain the allowable effects on the experiment; qualify the limits if possible (e.g., 10% modification of ambient environment composition; or 10% degradation of 1400 Å waveband; or allowable

- List the FOs where induced contamination is a concern.

molecules/cm² column density).